DOCUMENT RESUME

ED 032 695 EC 004 495
By-Young, Earl B., Ed.
Vocational Education for Handicapped Persons: Handbook for Program Implementation.
Pittsburgh Univ., Pa.
Spons Agency-Office of Education (DHEW), Washington, D.C. Div. of Vocational and Technical Education.
Pub Date Aug 69
Note-131p.
EDRS Price MF-$0.75 HC-$6.65
Descriptors-*Administration, Aurally Handicapped, Community Involvement, Cooperative Programs, *Exceptional Child Education, Federal Laws, Interagency Cooperation, Mentally Handicapped, Organizations (Groups), Physically Handicapped, Professional Personnel, *Program Planning, Rural Areas, Speech Handicapped, Student Evaluation, Visually Handicapped, *Vocational Education, Vocational Rehabilitation

Information on vocational education for the handicapped considers the following: different types of handicaps; cooperation and interagency involvement; services available from vocational rehabilitation; a model for a state-wide cooperative agreement; programs and services; and provision of services in rural areas. Community involvement in vocational education services for the handicapped is discussed as are considerations in planning vocational education for the hearing impaired, for the visually impaired, and for the physically handicapped. Personnel preparation, utilization, and interactions are also discussed. Regional instructional materials centers and agencies and organizations in the field of the handicapped are listed; the Vocational Education Amendments of 1968 and references are included. (RJ)

ED0 32695

vocational education for handicapped persons

handbook for program implementation

EC004 958

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VOCATIONAL EDUCATION FOR HANDICAPPED PERSONS
HANDBOOK FOR PROGRAM IMPLEMENTATION

Editor

Earl B. Young

Contributors

William N. Craig
Lawrence P. O'Neil
Ralph L. Peabody
Harold F. Shay
Godfrey D. Stevens
Richard M. Switzer
Earl B. Young

This publication was prepared pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

August, 1969

ACKNOWLEDGEMENTS

The project staff of the National Conference on Vocational Education for Handicapped Persons was especially fortunate to have the fine response and cooperation of many persons. We are pleased to take this opportunity to thank those who made major contributions to this undertaking.

We would particularly like to thank the staff of the Division of Vocational and Technical Education of the U.S. Office of Education for their continued support and guidance. Special thanks go to Dr. Edwin Rumpf, Mr. Michael Russo, Miss Barbara Kemp, Mr. Hal Young, and Mr. Emanuel Weinstein.

The Bureau of Education for the Handicapped in the U.S. Office of Education and the Rehabilitation Services Administration in the Social and Rehabilitation Service worked closely with the Division of Vocational and Technical Education and offered technical assistance and advice throughout the project. We would especially like to thank Dr. James Gallagher, Associate Commissioner, Bureau of Education for the Handicapped and Mr. Joseph Hunt, Commissioner, Rehabilitation Services Administration who joined Dr. Rumpf in addressing the participants at the National Conference.

We were very fortunate to be able to have the services of so many knowledgeable consultants. Their excellent position papers gave direction to the Conference participants. Our consultants were Dr. Salvatore DiMichael, Director, Institute for the Crippled and Disabled, New York City; Dr. Ralf Peckham, Assistant Superintendent, Michigan Department of Education, Lansing; Dr. Julius S. Cohen, Associate Director, Institute for Study on Mental Retardation, University of Michigan; Dr. G. Orville Johnson, Director, Department of Special Education, Ohio State University; Dr. Jerry Miller, Director, Special Education for the Philadelphia City Schools, Dr. Marvin Kivitz, Director of Education, Vocational Training and Rehabilitation, Elwyn Institute, Elwyn, Pennsylvania; Dr. D. Robert Frisina, Vice President, National Technical Institute for the Deaf, Rochester Institute of Technology; Dr. John W. Kidd, Assistant Superintendent,

Department for the Mentally Retarded, Special School District of St. Louis County; Dr. Jerry Olson, Assistant Superintendent for Occupational, Vocational and Technical Education, Pittsburgh City Schools; and Dr. Samuel T. Price, Department of Special Education, Illinois State University.

Those who served as discussion group leaders deserve particular praise for their professional contributions. We are grateful to Dr. Jack Dinger, Dr. Richard Weatherman, Dr. Karl Egerman, Mr. Herbert J. Wolfe, Dr. Richard Holman, Mr. Morton Bregman, Dr. Morvin Wirtz, Dr. Philip C. Chinn, Mr. William C. Geer, Mr. Richard M. Switzer, and Dr. Floyd McDowell.

The recorders, selected graduate students in the Department of Special Education and Rehabilitation of the University of Pittsburgh, devoted a great deal of time preparing reports for the project staff. We wish to thank Mr. William Garove, Mr. Douglas Morgan, Mr. William Penn, Mr. Robert Rinaldi, Mrs. Janet Klineman, Mrs. Mary Moore, Miss Karen Groves, Mrs. Sandra Golomb, Mr. Edward Handley, Mrs. Nancy Johnson, Miss Sheri Klein, and Mr. John Carroll for their efforts.

We are particularly grateful to Dr. Al Tudyman, Director of Special Education, Oakland, California Public Schools, Mr. Chester Loomis, Supervisor of Special Education, Detroit Public Schools and Mr. Don L. Partridge, Texas State Director of Special Education for preparing descriptions of their excellent programs for use in this document.

The project received continuing support from Dr. Paul H. Voelker, Chairman, Department of Special Education and Rehabilitation, University of Pittsburgh and the staff of the Department of Special Education and Rehabilitation. We sincerely appreciate their cooperation. Special thanks go to Mrs. Dana Paulick who served as project secretary.

Finally, we wish to acknowledge the participants who came to Pittsburgh and took part in the Conference. Similar thanks go to the staffs and participants of the Regional Clincs sponsored by the Division of Vocational Technical Education. We hope this report is worthy of their efforts.

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INTRODUCTION

Handicapped persons in our society have provided exciting challenges to those who provide for their education and rehabilitation. Provision for and modifications of services to accommodate to their needs have created problems which have stimulated innovation and imagination in the quest for appropriate solutions. The 1968 Amendments to the Vocational Education Act of 1963 have focused renewed attention on the handicapped. The Congress of the United States has mandated that 10% of the Federal funds allocated under Parts B of this Act be designated to provide vocational education to the handicapped. As State and local vocational education personnel attempt to implement such services, they will require reliable information about the handicapped and realistic suggestions about programs and services.

The purpose of this document is to make available some of the information vocational educators will require. The Division of Vocational and Technical Education of the U.S. Office of Education has contracted with the Department of Special Education and Rehabilitation, University of Pittsburgh, to prepare the material for presentation. The process of preparation has involved a large number of vocational educators, special educators, and vocational rehabilitation specialists from all sections of the country. Between February 25-27, 1969, a National Conference on Vocational Education of Handicapped Persons was held in Pittsburgh. In attendance were 200 invited persons with interest in one of the three fields. These people were stimulated to discussion by position papers prepared by six nationally recognized leaders in these fields. The ideas developed at this conference were summarized and presented at nine regional clinics conducted by the Division of Vocational and Technical Education. At this level ideas were refined, further suggestions were received, and have been incorporated into this document.

Not all of the questions which need answers can be effectively handled in this document. The intended audience represents such a wide range of backgrounds and needs that only suggestions and recommendations are possible. The task of local program development and operation continues to require that vocational educators, special educators, vocational rehabilitation specialists, and others work closely together. This document, however, should provide a basis for constructive action.

The education process for handicapped persons may be viewed as the modification of educational practices, instructional programs, and school plants for those individuals who possess disabling conditions which prevent them from learning at the normal rate. The wide variation of these modifications emphasize the individualization of instruction.

Education for "the good life" in "a great society" has been a basic philosophic position since early times. Education for an occupation has been a major part of the educational enterprise in all societies in recorded history. People were trained to perform some useful service, in some formal manner, leading to service in the church, government, the military, and for the crafts and trades. It was not until the Greeks generated and propagated the notion of the "Seven Liberal Arts" that education took on a non-vocational function.

The Judeo-Christian ethic of work has provided an added impetus to vocational training beyond the obvious economic necessity of working to earn money with which to buy services or products. Work is good. Those who work, (says the ethic) will prosper in body and mind.

In free societies everyone is assumed to have the right to work. Indeed, the individual is expected to work since everyone is expected to contribute to the commonweal. Free men are expected to "know about" and to "know how to." Both of these are essential to the well-being of each person.

There are certain theoretical considerations which serve as the basis for vocational education for all. Free societies can flourish when they make maximum use of their resources, both human and natural. Any individual who does not contribute his share to the socio-economic system is viewed as an economic liability. Thus, every potential worker must be trained to perform some useful service to the maximum of his capabilities. This kind of "economic realism" coupled with the philosophy of humanitarianism provides the basis for a society which is meaningful and conducive to physical and group well-being.

Those who do not, or cannot, contribute their share to the common good must be borne by the more fortunate. It is incumbent upon any free society, however, to make certain that each person be given the opportunity to earn a living, thus making it possible for him to enjoy "the good life." Experience has shown that the disabled, when properly educated, achieve the state of well being which is the birthright of all in free societies.

All this is to say that the philosophical and theoretical foundations of all education pervade the conduct of the vocational educator and special educator as well. Working side by side, each using his special skills and knowledges, the vocational preparation of every young handicapped person can be achieved.

This document strives to answer specific questions of program implementation. Wherever possible, model programs have been outlined to explain the concepts of service which are presented. A total program concept is offered as a guide. At the local level, decisions will have to be made as to what portion of the program will be allocated to specific departments or agencies. Differences in implementation will reflect geographic and administrative variables which can only be accounted for through the cooperation of the parties involved.

Wherever possible the reader has been directed to primary source material as the means of exploring specific topics in greater depth than in possible in this document. The reader is also advised to contact those specialists in or around the local community who can offer guidance. The organizations listed in the appendix are offered as acceptable substitutes where personal guidance is not possible. Additional help can be obtained by contacting personnel in state department offices.

The largest portion of this document deals with the services to persons with permanent intellectual deficits. Special sections have been prepared which are specifically addressed to the hearing impaired, the visually impaired, and the physically handicapped.

Earl B. Young
University of Pittsburgh

WHO ARE THE HANDICAPPED?

The handicapped are a diverse population within our society. They vary in characteristics to as large an extent as the non-handicapped. This section is devoted to giving the reader general insights into the nature of the handicapped. The classifications to be dealt with correspond to those specified for service in the Vocational Education Amendments of 1968. The reader should bear in mind that classifications are only arbitrary labels used to describe persons with similar disabilities. A classification cannot serve as the basis for defining the type of program needed by a particular person. Each person should be individually assessed so that his program can be designed to meet specific needs.

The material on Age Range, Size of Class, Transportation, and Special Materials is included to acquaint the reader with the scope of services typically available to the handicapped who have received special education.

MENTALLY RETARDED

For educational purposes, the mentally retarded are classified into two groups, educable and trainable.

The Educable

This group will probably comprise the largest single block of students to be served by the vocational educator. Two to three percent of the general population is thought to be educable mentally retarded. Their rate of intellectual development ranges from 50% to 75% of normal intellectual growth, although these figures are arbitrary. While exceptions are common, the large majority of educable students will achieve maximally at the sixth grade level.

Portions of the material in this chapter were adapted with permission from the School Management Magazine, October-December, 1967.

The educable can be served through a variety of instructional organization patterns. The most common pattern is special classes with participation in some activities in other parts of the school.

Special Education Services

Size of Class: Secondary classes in special education include 12-15 students. The more students there are in one class with a wide range of ages and mental abilities, the smaller the class should be. Newly organized classes are best begun with very small groups of students.

Age Range: Special education is usually organized in four groups for instructional purposes.

1. Pre-school class (nursery and kindergarten), ages 3-6 (mental age 2-4)
2. Elementary primary class - ages 6-10 (mental age 3-6)
3. Elementary intermediate class - ages 9-13 (mental age, 6-9)
4. Secondary school class - ages 13-19 (mental age 9-12)

Transportation: Sparsity of eligible students may require drawing in students to the school from great distances.

Special Materials: The materials used in regular classes must be changed or supplemented by special materials and instructional procedures adjusted to the retarded youngster's rate of learning.

Post-School Adjustment

When properly trained the educable may enter the world of work in positions comparable to the non-retarded. Usually, the highest level of attainment involves jobs in unskilled and semi-skilled areas. As more training resources become available, this pattern is changing and the educable are being prepared for jobs in industries formerly thought to be beyond their capacities.

The Trainable

The trainable respond more slowly to education and training than do the educable. Their rate of development is approximately one-quarter to one-half of the normal rate. An individual in this group is likely to have secondary physical or emotional problems in addition to retardation. Education and training emphasizes the acquisition of self care skills; social adjustment to the family, school and neighborhood; and economic usefulness in either the home or a sheltered situation. The trainable usually require some care, supervision, and economic support throughout life.

There are approximately three trainable individuals in every thousand people in the population. Vocational educators can expect to work with very few trainable students, although it is possible that these students might profit from exposure to selected aspects of the vocational education program.

Generally the trainable are served in special schools or special classes in regular schools.

Special Education Services

Size of Class: The class should be limited to six or seven. This is particularly true if students are away from home for the first time, or if age and mental abilities vary greatly. Class size can be larger if students are older, have had school experience, or are grouped according to age and/or mental ability.

Transportation: The cost of transportation becomes a major item in operating classes for these students, because they are unable to go to school unattended and because of population sparsity.

Post-School Adjustment

The trainable are being found more frequently in sheltered workshops as these become established. Some few do make moderately successful adjustments to community employment when adequate guidance is available. These jobs do not require skills which are traditionally taught in vocational education.

SPEECH IMPAIRED

Speech is considered defective simply when its deviation from average speech draws attention to itself.

The major categories of speech defects are: (1) articulatory disorders, (2) vocal disorders, (3) stuttering, (4) delayed speech, and (5) speech disorders associated with cleft palate, hearing impairment or cerebral palsy.

About 80% of the speech cases in school are articulatory disorders which involve substitutions ("wight" for right, "yeth" for yes, "ye-ow" for yellow, etc.), omissions (consonants dropped), distortions (whistling the "s" sound) and additions ("on-a the table").

There are approximately 35 students out of every 1,000 who can be classified as having speech impairments.

Special Education Services

Size of Class: Most students receive therapy in groups of four and some receive individual therapy. The therapy sessions may last 30 minutes and are usually held twice a week.

Age Range: Speech correction services are usually concentrated in the following ways: 75% in grades K-2, 19% in grades 3 and 4, 7% in grades 5 through 12.

Post-School Adjustment

In most cases these students will make the same adjustments as regular students.

VISUALLY IMPAIRED

For educational purposes the visually impaired are classified into two groups, the blind and the partially sighted.

A blind student is one who has so little vision that the senses of touch and hearing must be substituted for sight when teaching. Braille is most often used by these students. Many magazines and books are regularly translated into braille for use by the blind. Tapes and records are also available. The reader is directed to the Instructional Materials Center at the American Printing House for the Blind, the Library of Congress, or to local service agencies for specific help in locating and identifying applicable instructional material.

The partially sighted are able to utilize some remaining vision for learning. Special materials, instructional procedures, and conditions are incorporated to accommodate to the students.

There are few blind and partially sighted persons in the general population by comparison with the mentally retarded. There are approximately 3 blind students and 6 partially sighted students out of every 1000. Occasionally a visually impaired student will take part in vocational education, but as a rule specific programs should not be established in the public schools to serve this population. The visually impaired are educated in a variety of organizational arrangements related to the severity of loss of vision. The partially sighted are integrated as fully as possible into regular school programs with itinerant teachers and resource rooms available when necessary. Very often the blind are brought together in residential schools where the preparation for possible return to the community is intensive.

Special Education Service

Size of Class: Six blind students per class; 8 to 12 visually impaired students per class.

Age Range: Usually from 3 to 21 years.

Special Materials: Books with large type, typewriters, projection and magnifying equipment are just a few of the special materials used by the partially seeing. For the blind there are braille materials, audio equipment, maps and globes with relief surfaces, etc.

Transportation: Here again, the relative sparsity of the blind and partially seeing - 9 students out of every 10,000-- makes transportation a major problem.

Post-School Adjustment

A number of agencies provide employment for the blind. Most prominent among these are the Lighthouse for the Blind workshops in cities throughout the country. As training programs become available, more blind and partially sighted individuals are being prepared for community employment.

HEARING IMPAIRED

Students with impaired hearing are classified into two groups for educational purposes: the deaf and the hard of hearing.

Students are considered deaf when their sense of hearing is non-functional for ordinary purposes. There are two classes in this group, based on the time when loss of hearing occurred: (1) the congenitally deaf - those who were born deaf; (2) the adventitiously deaf - those who were born with normal hearing but whose hearing has become nonfunctional, due to illness or accident.

Although the sense of hearing in these students is defective, it is considered functional either with or without a hearing aid.

Approximately 1 student out of every 1,000 is deaf; five students out of every 1,000 are thought to be hard of hearing.

The deaf and hard of hearing are educated under many organizational plans, particularly resource rooms, itinerent specialists, and special classes. For severely hearing impaired youngsters many cities operate special residential schools. These schools serve rural, as well as urban areas.

Special Education Services

Size of Classes: Usually 6 to 8 students

Age Range: Instruction should begin very early. Some parent-child programs begin when the child is only 10 months old.

Transportation: Here again, the relative sparsity of these youngsters usually make transportation a major expense.

Post School Adjustment

The hearing impaired can adjust to working situations in the community. Some few will need extended sheltered employment. Some agencies now offer rehabilitation programs specifically designed for this population. In some urban centers, the deaf have been able to share living accommodations, religious and recreational activities.

CRIPPLED AND HEALTH IMPAIRED

These students have limited abilities in self-mobility, sitting in a classroom, and using materials for learning because of muscular and neuromuscular handicaps. These conditions include cerebral palsy, muscular dystrophy, multiple sclerosis, poliomyelitis, spina bifida, paraplegia, and heart conditions.

Some students have limited abilities, similar to those listed above, due to skeletal deformities. Examples include clubfoot, congenital dislocation of the hip, scoliosis (curvature of the spine), bone cysts, tumors, and conditions caused by accidents.

Other students have limited strength, vitality, and alertness for school work due to chronic health problems. Examples include heart conditions, tuberculosis, rheumatic fever, nephritis, infectious hepatitis, infectious mononucleosis, asthma, hemophilia, epilepsy, leukemia and diabetes.

There are approximately 20 such students who suffer from one of these diseases out of every 1,000. This population should be integrated with regular students whenever possible, depending on the degree of impairment.

They may also be served in resource rooms, special day schools, special classes, hospital instruction, and homebound instruction.

Special Education Service

Size of Class:

1. Special classes, 8 to 12 students. If children are severely handicapped, size should be smaller.
2. Homebound students, of course, must receive "individual" instruction. The case load per teacher varies from 5 to 12 students, depending on the length of time spent with each student, the number of visits per week, travel time, and State regulations and rules.
3. Hospitalized students can receive both individualized and small group instruction.

Special Materials: Homebound and hospital programs can incorporate educational TV, radio programs, home-to-school telephones and some kinds of teaching machines. Specially designed equipment makes it possible for the physically handicapped to learn most activities of daily living. Many community organizations are very responsive to raising funds for purchasing special materials and equipment for these children.

Transportation: Many of these children use wheelchairs and/or orthopedic devices. The time and expense involved in transportation can be considerable.

Post-School Adjustment:

This depends on the severity of the disability and the presence of secondary related problems. Employers are finding that they can successfully employ this population to perform jobs of greater complexity than were formerly considered possible. The physically handicapped, particularly those in wheelchairs, have special problems in dealing with architectural barriers.

EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED

Emotionally Disturbed. The behavior of the student may be inappropriate to the point that it is both distracting and disruptive to the rest of the class, placing undue pressure on the teacher and intensifying the pupil's own problems.

Socially Maladjusted. Students who are constantly causing trouble in school or at home (truants, predelinquents, delinquents, and "incorrigibles").

There are approximately 20 emotionally disturbed or socially maladjusted students out of every 1,000. These persons are educated most often in special classes or special schools. Due to poor identification procedures many emotionally disturbed or socially maladjusted students are not receiving adequate service. Many are in the regular programs and are not receiving special education.

Special Education Service

Size of Special Classes: Emotionally disturbed, 6 to 8 students; socially maladjusted, 10 to 15 students.

Special Materials: These students may reject textbooks that stress middle-class values and behavior, and are illustrated with "conformist" children. Therefore, a library of special instructional materials usually must be developed. Audio and visual tapes, movies, and slides, records, and programmed learning devices are valuable teaching aids.

Transportation: Location of a special day school or special classes may make transportation a major problem.

Post-School Adjustment

The potential for this population varies greatly. When properly treated and trained, some enter the community and make valuable contributions.

ORGANIZING FOR COOPERATION--INTERAGENCY INVOLVEMENT

Effective vocational education for the handicapped depends on close cooperation between vocational education, special education, and vocational rehabilitation. The regulations to implement the Vocational Education Amendments of 1968 in Section 102.40 states in part that "the State plan shall provide for cooperative arrangements with the State Special Education agency, the State Vocational Rehabilitation agency, or other State agencies having responsibility for the education of handicapped persons in the State."

The State plan, to be implemented efficiently, will depend on working arrangements at local levels. Each situation requires imaginative planning by schools, public and private agencies, and other related groups. Since no hard rules will cover all situations, this section will present examples of effective State and local cooperation. Administrative organization, financial and legal considerations in the State vary and should be carefully examined as plans are developed.

Following is a brief description of how the Texas Education Agency is planning for vocational education services for handicapped students. The services will be jointly operated by the Divisions of Vocational Education, Vocational Rehabilitation, and Special Education.

Vocational Education Services for the Handicapped In Texas

I. Organization for Planning

LEVEL ONE

The Commissioner's Coordinating Council.** The Commissioner's Coordinating Council is

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**"Commissioner" refers to the Texas State Commissioner of Education.

composed of the Commissioner, the Deputy, Associate and Assistant Commissioners and meets bi-weekly.

LEVEL TWO

The Executive Planning Committee. Reporting to the Commissioner's Coordinating Council is the Executive Planning Committee composed of the 27 major division directors. This committee also meets bi-weekly on alternate weeks.

LEVEL THREE

Standing Committees and Special Task Forces. Reporting to the Executive Planning Committee are four standing committees composed of selected Agency professional staff and a variety of standing task forces and temporary task forces.

One of the standing task forces is a task force for coordinating vocational education, vocational rehabilitation, and special education programs. The membership of this task force is composed of two members from each of these divisions and one member each from Guidance and Counseling, Secondary Education, Funds Management, and the Office of Planning.

II. The Work of the Task Force for Coordinating Vocational Education, Vocational Rehabilitation, and Special Education Programs.

This task force meets on call as needed. It has had a major responsibility for the State policies relating to the Cooperative Vocational-Academic Education (CVAE) program, for planning three demonstration projects that are currently (or will be) in operation, and for coordinating the planning effort of the State Plan for Vocational Education.

III. Brief Description of Pilot Projects to Date

1. Longview Independent School District - Program started in January, 1968. It consists of two junior high school level classes for the educable mentally retarded, served by two vocational education teachers and one vocational rehabilitation counselor (part-time). The special education teachers provide the academic preparation for the students; the vocational education teachers provide vocational training appropriate for the groups; the vocational rehabilitation counselor follows through with off-campus supervised job training.

2. El Paso Independent School District - This project has been in planning for almost a year and is scheduled for operation September 1, 1969. It consists of two vocational education teachers, one for boys and one for girls; four high school classes for the educable mentally retarded; and one vocational rehabilitation counselor. The pattern will be similar to the Longview project except the vocational classes are located in a technical high school and the four educable mentally retarded classes are located on four different academic high school campuses. In this project vocational rehabilitation has also provided a large portion of the equipment for the vocational education program.

3. Region XIX Education Service Center, El Paso The project is named "Vital Information for Education and Work." This project originally started under NDEA, Title V to provide current and up-to-date information on vocational opportunities for high school students. Through ESEA, Title VI monies it has been broadened to include a special component for handicapped students. Future plans at this time are to attempt the development of this project on a state-wide basis using vocational education, vocational rehabilitation, and special education funds.

IV. The Future

As of September 1, 1969 the Division of Vocational Rehabilitation will cease to exist and a new State Commission for Vocational Rehabilitation will be established. This creates an additional dimension for planning efforts.

The plan at this time is for the vocational education monies earmarked for the handicapped to be used for pilot projects. Plans are being made for both divisions; that is, vocational education and special education, to review these projects jointly. The operating techniques at this time have not been finalized.

The role of special education is seen as one which aids vocational education and vocational rehabilitation in avoiding duplication of their respective efforts.

To date there have been no major problems encountered in the joint planning that have not been resolved by employing the conference table method.

THE DETROIT GALAXY PROGRAM, Detroit Public Schools

The Detroit Public Schools have a model program of cooperation between special educators and vocational educators at the local level. While no funds are appropriated from the State of Michigan to categorically support this exchange, the two local departments have coordinated their efforts to assure adequate service for the handicapped in vocational education programming.

In September, 1966, a building services and landscape gardening program opened at a Detroit junior high school which offered training to the handicapped. From this initial effort programs evolved in personal service, commercial food preparation, health services, fabric and clothing, gasoline service station, and small appliance repair. From one center offering one training program, there are now eleven centers which have from one to four programs each.

The impetus for this cooperation grew out of a World of Work Committee which functions to consolidate the efforts of the district to plan vocational preparation programs. The Committee is made up of personnel representing vocational education, special education, business education, administrators, in addition to curriculum specialists, and school housing personnel. Working as a team, this committee accepts recommendations from the department of the school which desires to establish programs related to vocational preparation. All of the proposals are reviewed,and if accepted, are directed to the State Department of Education. When decisions of funding allocations are made at the State and the level of funding is known, another set of decisions is made as a priority of need. Some programs are begun, others are delayed pending additional funding, and others are remanded. The essential quality of this approach is that each affected department plays a role in the decision-making process.

Recently a new concept of service was proposed in Detroit. The "Galaxy" program,as it is known, offers exploration into clusters of jobs, followed by training in that specific field which seems most appropriate.

Tables 1 and 2, which are included, give examples of the types of programming possible using this system. Most handicapped persons find success in the occupational preparation galaxy. Some few are accommodated in the pre-trade galaxy.

Table 1

DETROIT PUBLIC SCHOOLS
OFFICE FOR IMPROVEMENT OF INSTRUCTION
WORLD OF WORK DEPARTMENT - VOCATIONAL EDUCATION SECTION

CAREER PREPARATION

AN EXPLORATORY ANALYSIS OF VOCATIONAL EDUCATION SUBJECT-AREA GALAXIES SHOWING INSTRUCTIONAL AREAS IN DEPTH FOR FOUR LEARNER ABILITY/INTEREST AREAS *

All Students (Exploratory) Grade 10		Science Engineering- Further Education Essential Grades 11-12, CO-OP	Technician- Further Education Recommended Grades 11-14, CO-OP	Pre-Trade Preparation- Further Education Valuable Grades 10-12, CO-OP	Occupational Prep. - Further Education Opt. Grades 10-11-12 CO-OP and Work Experienc
		Note: The job titles and DOT numbers are representative examples only			
MATERIALS AND PROCESSES	1	Cybernetics 007.168 012.168 020.088	Machine Tool Layout 606.150 Tape Control Tech. 012.288 Automation Tech. 638.231 Data Process Tech. 020.088	Machinist 600.280 Tool-Die Maker 601.280 Machine Repair 632.281 Machine Tool Set-up 600.380	Machine Operator 600.286 Press Operator 610.619 Rigger 921.887 Millwright 638.281
	2	Metallurgy and Microanalysis 011.081 010.081 024.081	Fabrication Tech. 619.380 Metallurgy Tech. 011.281	Pattern Maker 693.281 Welder 810.884 Sheet Metal 804.281 Pipe Fitter 862.381	Assemblers 806.781 Production Welder 813.885 Metal Finisher 705.884 Burner 816.782
	3	Structures 005.081 007.081 019.081	Inspector 182.287 Wood Products Tech. 040.081 Concrete Technician 570.532	Lather 842.781 Carpenter 860.281 Model Maker 661.281 Roofer 304.281 Furniture Upholsterer 780.884	Millman 669.380 Construction Laborer 809.887 Carpenter's Helper 869.884
	4	Landscape Architecture 001.081 018.168 040.081 059.086	Nurseryman 406.168 Landscape Tech. 168.168 Planner 199.168 Park Foreman 407.134	Vegetable Grower 403.181 Lawn-Shrubbery 406.887 Landscape Gardener 407.181 Nursery Man 406.168	Farm Hand 421.883 Laborer, Nursery 406.884 Garden Equipment Operator 409.883 Flower Grower 406.181
	5	Industrial Chemical Applications 022.081 006.081 010.081	Ceramics Foreman 775.131 Plastics Foreman 556.130 Prototype Foreman 754.137	Cement Worker 844.884 Bricklayer 861.131 Layout Man 751.381 Plasterer 842.381	Chemical Process Operator 559.380 Plastics Repairman 754.884 Machine Operator (plastics) 559.782 Batch Still Oper. 552.782

*Highest Ability/Interest Level ——▷ Lowest Ability/Interest Level

All Students (Exploratory) Grade 10		Science Engineering - Further Education Essential Grades 11-12, CO-OP		Technician- Further Education Recommended Grades 11-14, CO-OP		Pre-Trade Preparation- Further Education Valuable Grades 10-12, CO-OP		Occupational Prep. - Further Education Opt. Grades 10-11-12 CO-OP and Work Experience	
		Note: The job titles and DOT numbers are representative examples only							
VISUAL COMMUNI-CATION	1	Graphics	007.081 012.081 183.118 012.188	Photo Engraver Photo Copy Foreman Paper Technician Film Technician	971.281 979.130 029.281 976.131	Compositor Printer Photographer Lithographer	973.381 651.782 143.382 972.281	Silk Screen Operator Print Shop Helper Print Developer Book Binder	979.884 979.886 976.885 977.781
	2	Writing	052.088 051.088 130.088 132.068	Reporter Technical Writer Translator	132.268 139.288 137.288	Rewrite Copy Writer	132.268 132.980	Messenger Stockman	230.878 222.138
	3	Product Development	007.281 007.081 003.281 007.187	Industrial Designer Reproduction Technician Auto Body Designer Architectural Draftsman	142.081 976.381 017.281 001.281	Draftsman-Detailer Product Draftsman	017.281 007.381	Blueprint Machine Operator Records Keeper	979.782 207.782
	4	Fine Arts	141.031 141.051 141.081	Advertising Layout Interior Designer Artist, Commercial Artist	162.158 142.051 141.081 141.281	Sign Painter Cartoonist Jeweler Painter	970.081 144.081 700.281 840.781	Production Painter Paper Hanger	845.781 841.781
	5	Office Practice	020.088 020.188 050.088	Purchasing Agent Programmer Accountant Bank Officer	162.158 020.188 160.188 186.118	Bookkeeper Teller Stenographer Computor Operator	210.368 211.368 201.268 207.782	Mail Clerk Typist Clerk Delivery Clerk	231.588 203.138 219.388 222.587

All Students (Exploratory) Grade 10		Science Engineering- Further Education Essential Grades 11-12, CO-OP	Technician- Further Education Recommended Grades 11-14, CO-OP	Pre-Trade Preparation- Further Education Valuable Grades 10-12, CO-OP	Occupational Prep.- Further Education Opt. Grades 10-11-12 CO-OP and Work Experience
		Note: The job titles and DOT numbers are representative examples only			
ENERGY AND PROPULSION	1	Ground and Water Systems 014.081 Power Systems 015.197 187.198	Automotive Technician 620.131 Automobile Service Technician 620.281 Marine Technician 623.131	Locomotive Engineer 910.383 Auto Mechanic 620.131 Auto Body Repairman 807.381 Outboard Engine Serviceman 625.281	Assembler 806.887 Gas Station Operator 915.867 Vehicle Driver 913.873 Truck-Tractor Operator 892.883
	2	Aero-Space Systems 002.081 021.088 013.081 025.088	Pilot 196.168 Flight Engineer 621.281 Inspector 722.381 Meteorology Tech. 025.088	Air Frame Mechanic 621.281 Power Plant Mech. 621.281 Air Traffic Controller 193.168	Assembler 806.381 Plane Washer 919.887 Counterman 289.358
	3	Instrumentation and Measurement 018.188	Instrument Technician 003. 281 Instrument Foreman 710.131	Office Machine Repairman 633.281 Watch Repair 715.281 Instrument Maker 600.280 Instrument Repair 710.281	Helper 710.884 Instrument Assembler 706.884 Cleaner 919.887
	4	Energy Source System 012.081 007.081 015.081 023.081	Maintenance Mechanic 631.281 Power Plant Tech. 638.281 Stationary Engineering Tech. 950.131 Service Supervisor 187.168	Stationary Engin. 950.782 Applicance Repairman 723.781 Refrigeration Mechanic 637.281 Air Conditioning Serviceman 637.381	Oiler 699.887 Firetender 951.885 Rigger 921.280 Furnace Repair. 869.281
	5	Electronic Systems 003.081 003.151 003.187	Electronic Tech. 726.281 Electronic Systems Tech. 024.288 T.V. -Radio Tech. 720.281	Electrician 821.381 Industrial Elect. 825.281 Electronic Repair. 828.281 T.V. Repairman 726.781 Radio Repairman 720.281	Meter Readings 239.588 Solderer 726.781 Frameman 822.884 Assemblers 729.884

All Students (Exploratory) Grade 10		Science Engineering- Further Education Essential Grades 11-12, CO-OP	Technician- Further Education Recommended Grades 11-14, CO-OP	Pre-Trade Preparation- Further Education Valuable Grades 10-12, CO-OP	Occupational Prep. - Further Education Opt. Grades 10-11-12 CO-OP and Work Experience
		Note: The job titles and DOT numbers are representative examples only			
PERSONAL SERVICES	1	Nutrition 077.128 077.081 096.128	Chef 313.281 Restaurant Manager 187.168 Commissary Man 185.168	Pastry Chef 313.131 Baker 526.781 Butcher 316.781	Short Order Cook 314.381 Kitchen Helper 318.887 Food Process Worker 319.884 Waiter-Waitress 311.878
	2	Shelter Care 055.088	Sanitarians 079.118 Hotel and Motel Mgr. 163.118 Institution Manager 187.118	Stewardess 352.878 Housekeeper 321.138 Bellman 324.138	Building Maint. 899.381 Window Cleaner 381.887 Custodian 382.884
	3	Anatomy and Microbiology 070.101 073.081 079.108	Medical Technol. 078.281 Dental Lab. Tech. 712.381 Nurse 075.118	Practical Nurse 079.378 Cosmetologist 332.271 Barber 330.371	Hospital Attendant 355.878 Animal Caretaker 356.874 Shampoo 332.271
	4	Clothing 096.128	Garment Designer 142.081	Seamstress 785.381 Power Sew. Mach. Opr. 787.782 Dry Cleaner 362.884	Trimmer 780.884 Pressman and Spot. 363.782 Shoe Repairman 365.381
	5	Distribution 250.158 250.358	Agents and Brokers 250.258 Manufact. Rep. 260.118 Buyer 162.158 Sales Engineer 289.118	Mail Carriers 233.388 Sales Person 290.068 Cashier 211.138	Stockman 222.138 Packager 920.887 Postal Clerk 232.368
	6	Performing Arts 079.108 090.168 092.228	Actor 150.048 Musician 152.048 Dancer 151.048 Singer 152.048	Property Man 964.168 Customer 969.261 Athlete 153.348 Comedian 159.084	Check Room Attend. 358.878 Attendant 355.878 Usher 344.138
	7	Recreation 153.118 040.081 079.878	Coach 153.228	Forestry Aides 441.384 Recreation Worker 195.288	Groundman 406.887 Attendant 341.368
	8	Protective Service 110.108	Agents 375.168	Policeman 375.118 Fireman 373.118	Watchman 372.868 Guards 376.868
	9	Mental Health Service 045.088 054.088 120.108	Personnel Relations 166.088 Counselors 045.108	Community Agent 195.168	Orderly 355.878

DETROIT PUBLIC SCHOOLS
OFFICE FOR IMPROVEMENT OF INSTRUCTION
WORLD OF WORK DEPARTMENT - VOCATIONAL EDUCATION SECTION

Table 2

CAREER PREPARATION PLAN

GRADE	CLUSTER 1 MATERIALS AND PROCESSES LABORATORY	CLUSTER 3 VISUAL COMMUNICATIONS LABORATORY	CLUSTER 3 ENERGY AND PROPULSION LABORATORY	CLUSTER 4 PERSONAL SERVICES LABORATORY
	JUNIOR HIGH SCHOOL			
7B	20 WEEKS ONE PERIOD			
7A			20 WEEKS ONE PERIOD	
8B		20 WEEKS ONE PERIOD		
8A				20 WEEKS ONE PERIOD
9B	10 WEEKS ONE PERIOD		10 WEEKS ONE PERIOD	
9A		10 WEEKS ONE PERIOD		10 WEEKS ONE PERIOD
	SENIOR HIGH SCHOOL STUDENT MAKES VALIDATED CHOICE OF TWO OF THE FOUR CLUSTERS			
10B	20 WEEKS, TWO PERIODS, 1ST CHOICE OF TWO CLUSTERS			
10A	20 WEEKS, TWO PERIODS, 2ND CHOICE OF TWO CLUSTERS			
11	DEPTH CAREER DEVELOPMENT IN ONE GALAXY LABORATORY 80 WEEKS PROGRAM / GOAL			
12	ONE PERIOD/DAY ---------------- SCIENTIST, MANAGER, ENGINEER/FURTHER EDUCATION NECESSARY TWO PERIOD/DAY ---------------- TECHNICIAN/FURTHER EDUCATION NECESSARY THREE PERIOD/DAY-------------- SKILLED TRADES, SERVICE, SALES/FURTHER EDUCATION VALUABLE FOUR PERIOD/DAY --------------- SINGLE OPERATION OPERATOR/WORK EXPERIENCE VALUABLE			

Although the possibility should not be precluded, handicapped persons will only rarely show aptitudes for either the science engineering or technician galaxies. Handicapped young people with orthopedic or sensory deficiencies are sometimes capable of achieving at these levels.

The Department of Special Education intends to open a center -- The New Garfield Center -- supported by vocational rehabilitation money to expand the available service to mentally retarded young people. The program will be patterned after the "Galaxy" program, maintaining maximum compatibility. Personnel will be recruited for their skills in specific job clusters and certified as vocational education teachers, contingent upon the receipt of necessary training in a recognized institution. Para-professionals will be trained to supplement teachers to enhance the total program. The programs to be offered are:

Industrial Materials and Processes

Auto Body Repair
Welding - sheet, spot, arc, cutting, construction

Construction Material and Processes

Landscaping and Site Maintenance
Building Mechanics (janitorial, custodial, light repair, etc.)
Building Construction (houses, garages, stores)

Personal Services

Commercial foods (short order service)
Commercial serving
Health Services (orderly, ward attendant, ambulance aide, medical library aide, etc.)
Child Care (nursery - 6 mo. to 5 years)

Energy and Propulsion

Auto Mechanics
Utility Engine Repair
Electrical appliance and motor repair

Visual Communication

Clerical Practices
Drafting, graphic arts and photography

One difference to be noted is that the materials and processes area has been subdivided into industrial and construction to create a galaxy which is more restricted and therefore more concrete for the students.

The sequence of training moves from general to very specific. The student begins by spending about 20 weeks in "Galaxy" where he explores any or all of the available training areas. During this period the student works with teachers, counselors (guidance and rehabilitation) and academic specialists. Other services do not necessarily cease.

The next step for a handicapped person is on-the-job training (OJT). During this time the school is extended into the community and the young person expands his skill and general work competency. If this is completed successfully the young person is returned for placement. After placement, the school continues to follow the worker and offers any needed support.

OAKLAND UNIFIED SCHOOL DISTRICT, Oakland, California

The Oakland Public School's Department of Vocational Education supports a plan to provide certain handicapped youth with an after-school program in the area of automotive service. In September, 1969, the school district will employ on an hourly basis and during after-school hours, two of the automotive service specialists presently teaching in the vocational education program. They will provide training for not more than 15 educable mentally retarded youth at the rate of 2 hours per day, four days a week for up to 40 weeks. The cost of instruction, supplies and equipment will be borne by the California Department of Rehabilitation while the vocational facilities will be provided by the Oakland School District.

The Department of Special Education of the Oakland Public Schools is working very closely with the Coordinator of Vocational Education of the Oakland Public Schools concerning vocational training which may be available to handicapped persons through the following sources:

A. Vocational Education Amendments of 1968
B. Vocational Occupational Center Program

It is anticipated that when funds under the Vocational Education Amendments of 1968 are available, the program for physically handicapped pupils with good hand use will be offering training in the field of electronic assembling. It is estimated that approximately 30 hours of training are now required for an electronic assemblyman who is unimpaired. It is felt it may take somewhat longer to train handicapped persons. There are other related courses that could be offered and will be explored when the time is propitious.

In reference to the Vocational Occupational Center concept mentioned above, this has been developed through specific legislation by the State of California. In effect it is possible for a school district or a number of school districts to develop a Vocational Occupational Center through a self imposed tax override not to exceed 10¢ on $100 of assessed valuation to develop centers which will train skilled and non-skilled individuals in semi-skilled and skilled occupational courses. An example of this is Business Machine Repair which requires at least everage intelligence. It is felt that the physically handicapped and the emotionally handicapped who are carefully screened could qualify for this type of training.

OTHER SELECTED CASE STUDIES OF VOCATIONAL EDUCATION PROGRAMS FOR HANDICAPPED PERSONS

Under a contract with the U.S. Office of Education, the Social, Educational Research and Development, Inc. (SERD) in the spring of 1968 undertook a study of vocational education programs for persons with special needs which are in operation throughout the United States. For the mentally retarded, SERD focused on four programs which exist on the east coast. The following synopses have been taken from the SERD Report to the Office of Education. The case studies are only highlights designed to present the basics of the programs and provide a concept of what services are necessary to operate a program for the mentally retarded.

Case Study A - Baltimore

This program is titled "A Job Preparatory Curriculum" and is operating to provide vocational education for the "slow learner" from a city school system. In this instance "slow learners" include persons who have either physical or mental handicaps. The program is designed to serve students, 16 or older, who have completed the ninth grade. It is designed to offer two years of service. The school provides training for service occupations and employment placement.

This synopsis was taken from the SERD Report, Contract # OC C-O-8-089015-3344 (010) completed August 31, 1968.

The school population is about 350 students, ages 16 to 20 years.

The school is staffed with a principal, a job coordinator, 24 full-time teachers, one part-time physical education teacher, one counselor, a librarian, and a nurse. The academic instruction is related to the job context or to a living context, e.g., legal aid, health services, welfare programs, etc. Occupational training is offered in 11 areas. The curriculum attempts to expose the students to as many areas as possible and to keep the courses flexible enough that each student's individual need might be met. The second year of the program concentrates on a work-study approach.

The program has a low pupil-teacher ratio and provides prevocational orientation and instruction in addition to the vocational education. The vocational program however, is rather restricted in its offerings. Although the school helps in job placement, there is no follow-up once students have been placed.

Case Study B - Buffalo

The program began on a pilot basis in one high school in 1964 with mentally retarded students who were enrolled at the twelfth grade level. They spent a half-day on the job in the local commercial, service, or industrial community. The jobs were secured by a teacher-coordinator. The special classroom teachers devoted a large segment of instructional time to the facing and solving of problems encountered by the pupil in the work experience. An interview, a psychological examination, and a medical examination were required before job placement. The State Division of Vocational Rehabilitation cooperated by providing case workers to aid in job placement and in the investigation of the safety and suitability of the training situations. A training fee was paid by the DVR to the cooperating employers and this fee, in turn, was paid to the participating student in the form of wages. The program was successful and was expanded until now it is in operation in each of the 12 secondary schools of the city. It is this comprehensive, decentralized, and city-wide character that makes this program unique among vocational education programs for the mentally retarded in U.S. secondary schools.

The program's staff during the 1967-68 year consisted of a program supervisor, six teacher-coordinators, one visiting teacher, one guidance counselor, and clerical assistants. All teacher-coordinators were certificated by the State as special education personnel and were recruited especially for this program. Under Title III of the Elementary and secondary Education Act (ESEA), the Division of Instruction of the school district has established a Demonstration Center for Teachers of Mentally Retarded Children.

A student entering the secondary program for the retarded under this special needs program undertakes a curriculum designed for four years. Each year is a sequence of phases planned to develop the pupil's potential and to prepare him to take part in the world of work. Students progress through four identifiable phases on an individual basis.

Phase I serves as an orientation period during which the student learns to adjust to the school surroundings. At this time, he learns to follow a rigid schedule: gains poise and self control; generally becomes familiar with the world of work; gains more competence in the basic skills; learns to recognize and accept his own limitations; is introduced to job opportunities available and how to apply for them; and learns the importance of getting along with others.

Phase II serves a dual purpose. It is basically an extension of Phase I, but also includes a detailed description of the occupations available in the local community, units on how to get a job and to hold it, and preparation for in-school and out-of-school work experience. The student learns to use the basic skills subjects to help him function independently. He also is taught the geography of government of the local community. Field trips are the major vehicle of instruction.

Phase III includes an in-school work program as an introduction to further work experience. This phase is a prerequisite to Phase IV. The student uses the basic skill subjects to help him in various job situations within the school environment. He receives training necessary to support himself in the world of work. The underlying philosophy of this phase of the curriculum is to enable the student to function independently in a work situation.

Phase IV moves the student from a school situation into the community for various job experiences. He continues to participate in classroom experiences correlated with the community job and receives further training in basic skill subjects. Half the student's time is spent in school and half in the community, with a typical pattern of 20 hours a week of work experience over a period of 30 weeks. The time in school is devoted to facing and solving problems met in the work experiences of the student. The aim of this phase is to prepare the student to gain the proper skills to retain a job after completion of the four-year program.

The holding power of the program appears remarkably strong. Whereas the dropout rate for mentally retarded secondary school students was 29% in the year immediately preceding the initiation of the program the average dropout rate during the past three years of the special program has been 1%.

The following features seem to make this an effective vocational education offering: A strong prevocational program during the first three years providing an opportunity for the enrollee to explore different occupations prior to his selection of a skill training. Second, the entire program is well oriented toward the labor market, through regular consultations with employers, representatives of the DVR, and field representatives of the State Employment Service. Third, the eleventh and twelfth grade elements of the program are well articulated. Fourth, there is an opportunity to earn an income while learning. The student receives academic credit for the work experience and earns a certificate of completion when he has completed the entire program.

Case Study C - Cleveland

This program operates to facilitate the development of academic skills and to impart marketable skills to those students, grades 7 through 12, from the 55 schools of the city which are involved in the project. The regular school year consists of two semesters. Beginning in 1967, a summer program was offered. This program is a joint Bureau of Vocational Rehabilitation and school venture with a predominant number of mental/functional retardates.

The school has a principal, an assistant principal, a program coordinator responsible for the ancillary services, about 50 teachers, three advisors, two home visitors, and a part-time staff consisting of a physician, nurse, dentist, dental hygienist, medical aide, speech therapist, and psychologist. Several orientation sessions are conducted early each year for new teachers.

The seventh and eighth grade students are organized into five transitional classes. Special remedial basic education courses are offered, with flexible and programmed materials, and extensive use of audio-visual aids. Periodically these classes participate in tours to locations of educational and cultural significance in the metropolitan area. Completion of this transitional program leads to a ninth grade program of courses in English, community civics, mathematics, general science, art, and occupational information plus a number of vocational ship experiences. Successful completion permits the student to move from the junior high level to the senior high level where, over a period of three years, he may be involved in one or more of the programs at the tenth to twelfth grade levels. Regardless of the level of instruction or the subject matter, the material is always related to the world of work or to the life situations of the students. A coordinating committee of staff members was created to correlate these academic areas as closely as possible with the vocational and occupational training activities. Regular exchanges between faculty of the academic and vocational phases are attempted, so each staff group is knowledgeable of the aims and activities of the other.

Six shops have been established for training purposes including Small Engine Mechanics, Horticulture Work-Study, Building Maintenance, Office Production, Engine Lathe Operations, and the Occupational Work Experience Laboratory. Also, three sheltered workshops are operated for the seriously mentally or physically handicapped students. These include Small Appliance Repair, Production Woodwork, and Shoe Repair. Customers are charged for the services and the students share the profits. Students are assigned to these shops, based on their expressed interests, aptitudes revealed by testing, and after-job counseling by staff members.

The Occupational Work Experience Program is a three year program. In the first year, at the tenth grade level, four periods per day are used for basic academic courses and two periods are open in the work laboratory. In the last two years of the program, half the day is spent in school in basic academic subjects while the other half is spent in a job. Completion of this three year program is recognized with a certificate. In recent years, as many as 10% of the students have been returned to regular school programs after varying periods of the program. The vocational phase is strong in the following ways: effective use has been made of Title I ESEA funds to obtain new training equipment; a prevocational program exists but with limited perspectives concerning the scope of occupations available; and the classes are close to the recommended maximum of fifteen students per class.

Case Study D - Manatee County, Florida

This school district, since 1947, has provided some educational opportunities for its special needs students. Records indicate that about 4.7% of the school population regularly needed these special services, which were included as part of the regular elementary, junior high, and high school programs. In 1964, a "Special Disadvantaged Project" was developed to effect "a comprehensive and coordinated program between special education and rehabilitation, with the view of bridging the gap between education and remunerative employment."

The program is staffed with a director, eight academic instructors, nine vocational instructors, and three guidance counselors. The DVR personnel involved in the program are a supervising counselor, three counselors, one social worker, and one job placement coordinator. Both the academic and vocational instructors must be certified by the State as public school teachers in exceptional education and the vocational teachers are further required to have had work experience in the occupational area being taught. The vocational staff was given special screening to insure interest, aptitude, and ability in working with disadvantaged youth. No in-service program of any depth and regularity has been developed, although regular staff meetings are held to discuss program problems and progress.

The instructional program provides three class periods of occupational training daily throughout the school year for students who are presently assigned to special educational classes in one of the seven secondary schools of the county. Approximately 70% of the program enrollees are assigned to upgrade special education classes at the home school. They do not receive units toward graduation nor is credit given them for participating in the occupational training program. Instead, they receive a certificate of completion. The remainder of the students who are assigned to graded classes do receive credits for the vocational courses and may proceed to a high school diploma. The skill training given at the center consists of six courses, each concerned with a general area of service occupations. During the first few weeks of the school year, the students are rotated through the six skill training areas to give them information and ideas concerning each one. The vocational training is quite flexible, permitting varied experiences within one occupational area and in related areas. It is possible for students in this program to transfer to the regular vocational course offered at the area center.

Close working relations with the Division of Vocational Rehabilitation and the State Division of Vocational Education are maintained to keep the content and methodology current to the newest ideas for the education of seriously disadvantaged youth. In addition, detailed case records are maintained on each individual's progress throughout the system.

The placement of students from this program is unusually high, almost 100% and at an average hourly rate of $1.60 per hour. This results from the policy of retaining persons in the program until placed, a quality program, and a substantial demand in this geographic area for semi-skilled and service personnel. Approximately 25 of the 1966-67 graduates progressed so well that they were trained in regular skill craft vocational courses. The program also has built-in follow-up counseling to assure job retention and permanency of adjustment.

There are many factors which contribute to the effectiveness of this program. The practices which recommend themselves to other programs are: (1) the careful planning of the program prior to its opening, which included not only course content and teaching method, but the critical matter of administrative arrangements; (2) the close and compatible relationship between the agencies involved; (3) careful selection of teachers; (4) teacher orientation; (5) frequent staff meetings; and (6) a training concept of training for job clusters, rather than individual occupations.

Residential schools and institutions, both public and private, are eligible to receive funds under the Vocational Education Amendments of 1968. These resources can be used to develop and upgrade vocational training programs. Institutions interested in applying for these funds should contact the State Director of Vocational Education.

SERVICES AVAILABLE FROM VOCATIONAL REHABILITATION

The public vocational rehabilitation program is a State-Federal partnership with State vocational rehabilitation agencies in each State providing vocational rehabilitation services directly to their handicapped clients. The program has had long experience in providing vocational services to handicapped young people in school settings and is an especially important resource for the vocational educator to become thoroughly familiar with as he develops his own activities for the handicapped.

In some States, a single vocational rehabilitation agency provides services to handicapped individuals with all types of disabilities; in other States there are two vocational rehabilitation agencies with one agency devoted exclusively to serving the blind and visually impaired. Vocational educators planning school programs will have to be careful, especially in planning activities for the visually handicapped, to assure that the appropriate vocational rehabilitation agency is involved in the planning effort.

The State vocational rehabilitation agencies maintain local offices throughout the State, usually in the larger cities and at the institutions and facilities at which they operate special vocational rehabilitation programs. Most agencies assign counselors to visit on a regular basis, the major public and private institutions in the State, and to the extent possible, counselors also visit the secondary schools in their areas.

Central to the vocational rehabilitation process is the vocational rehabilitation counselor who either himself provides, or arranges for other professionals to provide, any of the broad range of vocational rehabilitation services for which an eligible handicapped individual can qualify. A young person in need of assistance can

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*Written by Harold F. Shay, Assistant Chief, Division of Disability Services, Rehabilitation Services Administration, Social and Rehabilitation Services, Washington, D.C.

either make direct contact, or be referred to a counselor by others, such as his teacher or school guidance counselor. An individual is eligible if the vocational rehabilitation counselor can determine that: (1) he has a physical or mental disability; (2) he has a substantial handicap to employment, and (3) there is a reasonable expectation that providing vocational rehabilitation services will make him employable. The fact that an individual is disabled does not, in itself, make him eligible for vocational rehabilitation. In all cases, no matter what the disability, the three basic eligibility criteria must be met.

When an individual applies for vocational rehabilitation he is given a thorough diagnostic study which consists of a comprehensive evaluation of the pertinent medical, psychological, vocationa, educational, cultural, social, and environmental factors in his case. This diagnostic study, arranged by the vocational rehabilitation counselor, includes an evaluation of the individual personality, intelligence level, educational achievement, work experience, vocational apptitudes and interests, personal and social adjustment, employment opportunities and other pertinent data which might be helpful in determining both the individual's eligibility for vocational rehabilitation and the nature of the vocational education program in which he should participate.

Once an individual is determined to be eligible, he may receive any of the other vocational rehabilitation services provided by the vocational rehabilitation agency. These include:

(1) Counseling and Guidance - Carried out in close coordination with teachers and school counselors to ascertain the youngster's assets, problems and goals, and to formulate a plan of services for him.

(2) Physical Restoration - To correct or substantially modify within a reasonable period of time a physical or mental condition which is stable or slowly progressive. This includes such things as medical, surgical, and dental treatment services, prosthetic and orthotic devices, hospitalization and convalescent home care, hearing aids, wheelchairs, physical therapy, occupational therapy, speech therapy, eyeglasses and visual services, and psychological services, but it does not generally include treatment for acute or transitory conditions.

(3) Training including:

Personal Adjustment Training - To aid the young person to acquire personal habits, attitudes, and skills necessary to enable his effective future vocational functioning in spite of his disability.

Pre-Vocational Training - To create readiness for specific training or work opportunities by using actual or simulated work tasks in special sheltered workshop, or in school or community work situations, for periods of training or work experience.

Vocational Training - Arranged at the school or in the community, full-time or part-time, and in either formal vocational classes or on-the-job training; training provided under the auspices of vocational rehabilitation never duplicates public school vocational education programs already available to such students.

(4) Maintenance - This might include lunches during community work assignments or other maintenance of indigent persons in relation to other services when client is unable to secure them at home or at school.

(5) Placement - Includes job development activities and counseling with both employee and employer to ensure that a job placement is satisfactory.

(6) Follow-up - To help the individual to maintain himself in employment.

(7) Transportation - When necessary for diagnosis, or other services under an individual rehabilitation plan.

(8) Reader services for the blind and interpreter services for the deaf.

(9) Services to members of a handicapped individual's family when such services make a substantial contribution to the rehabilitation of the client.

(10) Other goods and services necessary to make the individual employable.

Over and above the services provided directly to its clients, the State vocational rehabilitation agency also can assist vocational education program development for the handicapped in a number of other ways. It can help in constructing, expanding, renovating, or equipping schools rehabilitation facilities and can help in staffing these facilities for a fifty-one month period. It can assist in such things as removing of architectural barriers from buildings where the handicapped could either be trained or employed; purchasing a special bus or other vehicle for transporting the handicapped, or providing special instructional materials for use by the handicapped.

A vocational education program for the handicapped which fails to utilize the vocational rehabilitation resource would be incomplete.

A MODEL FOR A STATE-WIDE COOPERATIVE AGREEMENT

Title: Vocational Education and Vocational Rehabilitation
Partnership in Secondary School Programming for
Educationally Handicapped Youth, Project Series #8

Prepared by: Indiana Department of Public Instruction,
Division of Special Education, Division of Vocational
Rehabilitation, and Division of Vocational Education.

INTRODUCTION

One of the purposes of the Title III project entitled Developing Cooperative High School Work Orientation Programs for Educationally Handicapped Youth was to demonstrate the effectiveness of focusing the combined financial, professional, and experience resources of the three existing state agencies primarily responsible for the education, training, and life adjustment of the handicapped. These three divisions of the Indiana Department of Public Instruction are:

1. Division of Special Education - charged with the primary responsibility of the development and coordination of programs modified to meet the special needs of handicapped children within the public school framework.

2. Division of Vocational Education - charged with a specific responsibility of providing for the vocational education training needs of public school children with special needs.

3. Vocational Rehabilitation - charged with a responsibility for educational and training services in preparation for employment, placement in a job, and follow-up as stipulated under the Laird Amendments, P. L. 89-333.

This document is a draft model of an agreement which may be drawn up between a school corporation and the three divisions of Indiana Department of Public Instruction. To qualify, the program should consist of a sequence of logical phases providing pre-employment services to the eligible participants.

It is suggested that the following procedures be observed by the schools as their proposals, based upon this revised model, are submitted for review:

1. Develop the plan in cooperation with the appropriate Area Vocational Rehabilitation Supervisor.

2. Utilize the assistance of personnel of the three divisions of the Indiana Department of Public Instruction, (a) Division of Special Education, (b) Division of Vocational Education, and (c) Division of Vocational Rehabilitation.

3. Submit five (5) copies of the proposed agreement to the Division of Vocational Rehabilitation. Copies of the proposal will subsequently be routed to the Division of Special Education and Vocational Education.

AN AGREEMENT BETWEEN THE
INDIANA VOCATIONAL REHABILITATION DIVISION
DIVISION OF SPECIAL EDUCATION
DIVISION OF VOCATIONAL EDUCATION

and the

____
(Name of School Corporation)

I. PURPOSES OF THE AGREEMENT:

The purpose of this agreement is to provide eligible vocationally handicapped students a program of pre-employment services not traditionally provided to students in the public school setting and which will enable them to continue in an organized program of pre-employment vocational experience in order to afford an opportunity to prepare for gainful employment.

To realize this goal a cooperative program has been developed and established by the ______________ Schools, in conjunction with and upon the recommendation of the Indiana Vocational Rehabilitation Division, Division of Vocational Education, and Division of Special Education.

The overall size of the Program provided by the school is limited only by the number of students available for services and the school's ability to provide such services.

The Pre-employment Vocational Experience Program (hereinafter referred to as the PVE Program) consists of a sequence of logical phases providing prevocational services to the eligible participants. The phases of the program may include:

A Vocationally Oriented Curriculum
Pre-employment Guidance and Counseling
In-school Work Adjustment Training
Job Exploration
Vocational Evaluation
Community Work Experience
Post School Training
Placement and Follow-up

II. ELIGIBILITY

All students enrolled in Special Education programs, Vocational Education Special Needs programs, and all additional students eligible for such enrollment shall be given consideration for participation in this program. Referral for the services of the program shall be the responsibility of the Pre-employment Vocational Coordinator of the ______________________ Schools. Determination of eligibility for rehabilitation services shall be the sole responsibility of the Indiana Vocational Rehabilitation Division. Individuals not considered eligible by the Indiana VRD may participate in the program at school expense.

III. PRE-EMPLOYMENT VOCATIONAL EXPERIENCE PROGRAM:

A. Organization

The PVE essentially consists of three general phases designed to: (1) identify vocationally appropriate and inappropriate individual characteristics; (2) provide opportunities and experiences for developing behavioral modification in line with the demands of the world-of-work and the personal needs of the individual (psychological, social and emotional); (3) afford a variety of pre-employment vocational experiences in progressively more competitive environments, establishing a sound experiential background for future vocational selection and placement.

The PVE services will be inaugurated for eligible participants upon their acceptance into the program and shall be provided as needed during the tenth, eleventh, and twelfth grades. Services to be provided at VRD expense must be formally authorized by the Vocational Rehabilitation Division prior to the actual provision of such services.

In general, the program sequence shall follow a predetermined pattern with provision for such flexibility as may be necessary to provide for the individual needs of the participants, as follows:

10th Grade - Pre-employment adjustment training within the school environment

Program objectives include vocational guidance in job families, development of appropriate aspiration levels, evaluation (personal, social, vocational), acquisition of knowledge and development of readiness through the use of pre-employment experiences.

11th Grade - Development of a realistic concept of the world-of-work

Continued vocational guidance in job families with emphasis upon community exploration in occupational areas; parallel classroom activities developing specific skills, attitudes and habits necessary to vocational training within the school and community; continued personal and vocational evaluation via work-testing activities in an occupational experiences laboratory, and a variety of actual and meaningful work situations, established with prior VRD approval.

12th Grade - Development of a realistic self-concept in the world-of-work

Progression to this final phase usually will involve participation in the cooperative work-study aspect of the program. The students will engage in various community based occupations on a regular part-time or cooperative basis, with continuing supervision and personal evaluation. In-school and community based work stations will be established with prior VRD approval. In the final semester, those demonstrating the necessary reliability and maturity (readiness) will work in selected community jobs, supervised regularly by the program coordinator for the purpose of evaluation and personal guidance.

B. Services and Responsibilities

Intake -

1. All special education tenth, eleventh, and twelfth grade students shall be eligible for referral. Referral will be initiated by the Pre-employment Vocational Coordinator of the ______________ Schools.

2. All referrals shall be made to the local counselor of VRD. Referral data shall include a recent psychological evaluation (which includes a WAIS or Binet) complete school, social, and educational histories, any other personal and educational data deemed pertinent by VRD.

3. All referrals shall be processed by VRD personnel in accordance with established procedures.

4. As a part of VRD eligibility determination each student-client shall be provided a medical examination at VRD expense.

5. Upon notification of eligibility of each student-client, the Pre-employment Vocational Coordinator and the VRD counselor shall arrange and conduct a client/parent orientation to the PVE program.

VRD Plan and Authorization to Purchase Services -

The VRD counselor is responsible for the preparation of a formal "Rehabilitation Plan" developed upon case work data available to date which includes data from the client/parent orientation to the PVE program.

The VRD counselor is responsibile for the preparation of a formal "Authorization to Purchase Services." The "Authorization" must be supported by the content of the formal Rehabilitation Plan. The "Authorization" must be prepared prior to the date of the commencement of the services being authorized.

Authorization for services will originate only with the VR counselor.

Evaluation -

1. Written reports of the status and progress of each client shall be an integral and continuous part of the program. Reports of these observations shall be frequent and periodic, provided no less than each academic period, and will be maintained by the Pre-employment Vocational Coordinator. Copies of all such reports shall also be submitted to the VR counselor. All persons involved with each client (teacher, counselor, employer, family) have a responsibility for providing this data.

2. Established evaluative techniques and instruments will be utilized where determined appropriate. Additional psychological and social evaluations may be provided by the staff of the ________________ Schools or from other agencies and service facilities in the community, when indicated and as requested or provided by the VRD.

Occupational Training -

1. Organization

Program recommendations shall be developed for each student-client compatible with the rehabilitation training needs of the individual. These recommendations shall be submitted to VRD by the Pre-employment Vocational Coordinator for modification and/or approval prior to authorization for services. Authorizations for service will originate only with the VR counselor.

The number of students and physical conditions of each training unit shall comply with the specifications for such classes, established by the State Department of Public Instruction.

Where appropriate to the overall program needs the school corporation will establish an "Occupational Experiences Laboratory" as an integral part of PVE Program. This laboratory should be established in accord with the recommendations of the Division of Special Education, Division of Vocational Education, and the Vocational Rehabilitation Division. It is intended to realistically replicate an industrial setting, and will be used in programming for students with special vocational needs. The OEL will provide supervised work adjustment and evaluation experiences, and may consist of a specific area especially equipped and maintained for such purpose; and/or may consist of a number of specified work training stations in a given school environment. Each arrangement will be specifically developed and each agreement consummated.

In cases in which specific basic skill training is provided the individual by the PVE program such training will be consistent with current community job opportunities. The Pre-employment Vocational Coordinator is responsible for conducting a current community occupational survey, or obtaining information regarding current occupational opportunities when available from agencies operative in the given community.

The general educational curriculum and specific pre-employment vocational experience plan for each level of the training unit(s) shall be submitted for the joint approval of the Divisions of Special Education, Vocational Education and Vocational Rehabilitation, including a description of the occupationally oriented materials to be used in implementing the program.

A follow-up of each participant completing or discontinuing the program shall be conducted at three month intervals during the first calendar year following termination. The Pre-employment Vocational Coordinator is responsible for the follow-up. The data gained shall be supplied to VRD for utilization in determining the effectiveness of the program in achieving its goals and in continuing planning for discontinued or repeat clients.

2. Personal Adjustment Training

The emphasis in parallel classroom activities shall be largely upon the development of those basic personal skills related to effective occupational and personal adjustment. They shall include occupational and environmental exploration, personal adjustment training, personal management, survival skills training, utilization of public utilities, facilities and services.

3. Work Adjustment

Work adjustment training shall generally consist of a variety and sequence of simulated and real occupational experiences designed to afford the individual an opportunity for self-development towards the program goal--additional post-school training or vocational placement compatible with aspirations and abilities may be provided by VRD.

The majority of the student-clients, because of age or nature of primary disability, will probably begin their occupational careers in entry-level occupations. Therefore, the primary emphasis of the PVE work adjustment program shall focus majorly on general pre-employment experiences directed toward the development of appropriate attitudes and habits. The skills specific to such entry occupations are best developed on the job, by the employing agency. The character of actual work performed by students will be determined by the employer, cases in which students are employed in sheltered workshops sub-contract work may be included. Work adjustment training will include a variety of experiences in such entry-level occupations. Special emphasis will be placed on developing:

1. Motivation
2. Work Tolerance
3. Self-reliance and reliability
4. Regularity and punctuality
5. Positive responses to direction and supervision
6. Peer group interpersonal relations
7. Perseverance on the job
8. Relative values of speech, accuracy and productivity

The progress and the plan of each student-client shall be reviewed at least once each semester by the PVE Program staff and the VRD counselor, and appropriate adjustment made where indicated.

4. Placement

Satisfactory completion of the program by the client shall include direct placement in an appropriate job; or continued VRD training and vocational counseling services designed to prepare the client for suitable employment.

The primary responsibility of the PVE program shall be the preparation of the individual to participate in continuing services toward optimum utilization of the individual's vocational potential. Vocational guidance and counseling towards this goal will be provided by the program staff and the Vocational Rehabilitation Counselor, throughout the course of the school program, in order to assure smooth transition to other community services under the auspices of VRD.

5. Program Evaluation

The evaluation of the PVE shall be continuous and reflect the extent to which the services provided have helped the individual attain the rehabilitation goals, as established in the formal recommendations. Such evaluation is the joint responsibility of the VRD and PVE staffs. Recommendations to alter the PVE program shall be approved by the Vocational Rehabilitation Division through its local counselor.

6. Supportive Services

All appropriate supportive services such as, parent and client guidance, social, psychological, special remedial services shall be provided by the schools, where competent professional staff is available. Other community based supportive services will be utilized on an individual need basis, upon the recommendation of the VRD and PVE administrations.

C. Staff*

Superintendent of Schools - Through his designated agent is responsible for the overall activities of the pre-employment program. He shall assist in interpreting school procedures and services as requested and operate the program according to standards established by the Indiana Department of Public Instruction.

Pre-employment Vocational Coordinator - is responsible to the ______________ __________ and will be responsible for the development and coordination of all pre-employment activities within the school and the community; will develop liaison between the school community and local and state agencies; will develop and coordinate training stations in cooperation with the VRD Counselor; will see that periodic evaluations and other pertinent information are kept in the student-client file; will prepare a quarterly budget covering costs to VRD for vouchering purposes; will collect pertinent data on students; will counsel with students on individual problems affecting job training. Where possible, this will be a full-time assignment and in no case will it be less than one-half time involvement. The Pre-employment Vocational Coordinator will meet the minimum requirements for certification set forth by the Teacher Training and Licensing Commission of the State Board of Education, and in addition shall have had occupational experience in business or industry. Graduate level training in counseling and guidance, special education, vocational education, and vocational rehabilitation is desirable.

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*Identify by name where underlined.

Psychologist - will be responsible for evaluation of learning ability, and of social competency, assessment of emotional stability, ascertainment of academic progress, appraisal of vocational fitness, formulation of recommendations, and participation in case conferences.

School Social Worker - will provide case history information on those students referred for pre-employment services who are not in special education programs; will act as a consultant to the pre-employment staff and will participate in case conferences.

Special Education-Vocational Education and/or Regular Classroom Instructors - will work closely with the Pre-employment Vocational Coordinator in reference to referral procedures and the in-school work experience program and vocational adjustment training program; will develop and implement, with the help of consultants, a parallel academic and vocationally oriented curriculum; will keep pertinent cumulative records to help determine readiness for particular phases of the prevocational program; will make referrals and recommendations and will provide supplementary data regarding the students as requested.

Division of Vocational Rehabilitation Counselor's Responsibility - The counselor and/or the area supervisor will be responsible for final determination of eligibility of students for VRD services. He will meet with students and parents to initiate the referral form and provide for special medical examinations, if needed. He will assist school staff and provide vocational rehabilitation counseling and guidance of students as required. He will meet periodically with the Pre-employment Vocational Coordinator and assist him in locating job training stations. He will attend all case conferences relative to student-clients.

D. Records and Reports

The coordinator of the PVE shall be responsible for establishing and maintaining client and program records and reports as required by VRD, Division of Special Education, Division of Vocational Education of the Indiana Department of Public Instruction and the Indiana State Board of Accounts; and such as may be required by the State and Federal Departments of Labor, Wage, and Hour Division. Where applicable, the "Criteria" cited in Standards for Rehabilitation Facilities and Sheltered Workshops, Vocational Rehabilitation Administration, U.S. Department of Health, Education, and Welfare, 1967; Section V, "Records and Reports," will be used in development of the PVE Program.

IV. IMPLEMENTATION

A. The ______________ School Corporation agrees to conform to the provisions of this agreement in providing services to the eligible student-client via the provision of adequate facilities, appropriate professional staff, and all available supportive services. The School Corporation also agrees to provide overall supervision to the PVE in conjunction with the Vocational Rehabilitation Division and in line with the terms of this agreement.

B. The Indiana Vocational Rehabilitation Division, as part of its commitment to this joint agreement will, in addition to providing professional personnel who work with the staff of the program, and the vocationally handicapped students, also assist the program financially, through the purchase of services. Such student-client services fall into two categories:

1. Those directly purchasable through the PVE Program, such as:

   a. Evaluation
   b. Personal Adjustment Training
   c. Work Adjustment Training
   d. Vocational Training

   Upon receipt of satisfactory evidence of these services, the Indiana Division of Vocational Rehabilitation will pay on an individual case basis a per student-client training fee to the ___________ Schools equal to one half (1/2) the established overall per-pupil cost for the school year which is $______. This reimbursement will be adjusted on the basis of student-client attendance at the end of each semester. Payment will be made following each semester of the regular school year.

2. Those services purchasable from other resources are described in VRD brochure, Opportunity for the Disabled Through Vocational Rehabilitation.

C. The Division of Special Education, as part of its commitment to this joint agreement, will reimburse this program, as authorized by Rule S-1 of the Rules and Regulations of the Commission on General Education, Indiana Department of Public Instruction, for the following:

1. Instructional Costs*

Name of Instructor	Certificate Number	Certificate Kind-Grade	Expiration Date	Job Assign.	% of Salary	Salary

2. Special Transportation*

Upon receipt of evidence of the approval for enrollment of each student into the program, the Division of Special Education, in accordance with the provisions of Rule S-1, Sections 2 and 7 E, will reimburse the ______________________________ for pupil transportation for one round trip each day the student is in school at the rate of $______________ per pupil per day.

*Annual reimbursement is based upon fiscal proration of available State Special Education funds.

D. The Division of Vocational Education agrees to reimburse programs developed in the area of Special Needs on a matching 50-50 basis. Federal funds will be provided to the local school corporation where evidence is submitted of the expenditure of local and/or state funds dollar for dollar. Any reimbursement is always authorized and approved, pending the availability of funds provided by the Vocational Education Act of 1963. Items which may be included in the budget are:

1. Instructional staff, (Academic-Vocational).
2. Guidance counselors to be used and percent of time devoted to this program.

3. Supervisory and other professional personnel to be used in the program.
4. Travel
5. Instructional equipment and supplies.

E. Special Conditions - The approval of this agreement is conditional upon the provision of data requested by the Divisions of Vocational Rehabilitation, Special Education, and Vocational Education.

V. FAIR LABOR STANDARDS ACT

The signing of this agreement signifies that the school corporation is complying and will continue to comply with Title 29, Chapter V of the Fair Labor Standards Act as amended in 1966 (effective February 1, 1967), and other amendments as they become effective. All work activities shall be compensated in compliance with the regulations of the Wage and Hour and Public Contracts Division of the United States Department of Labor.

VI. CIVIL RIGHTS ACT OF 1964

The signing of this agreement signifies that the school corporation is complying and will continue to comply with Title VI of the Civil Rights Act of 1964. "...to the end that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity...."

VII. EFFECTIVE DATE AND DURATION OF AGREEMENT

This agreement shall take effect on ________________ and shall remain in effect until ________________. The agreement is subject to annual renewal.

VIII. APPROVAL

Superintendent	Director, Indiana Division of Vocational Education
Date	Date
VRD Area Supervisor	Assistant Director of Program Services, Indiana Vocational Rehabilitation Division
Date	Date
Director, Indiana Division of Special Education	Director, Indiana Vocational Rehabilitation Division
Date	Date

PROGRAMS AND SERVICES

The task of educators is not merely to equip handicapped youth with saleable skills. They are committed to the greater challenge of providing students with an educative process which meaningfully and realistically prepares them for responsible competency and fulfilling involvement as workers and citizens. This curricular commitment begins before the secondary vocational level. With handicapped students, vocational education should begin early in the school experience. To reduce and remove later hindrances to employability and to training it is suggested that responsibility for pre-vocational education of the handicapped begin on the day of initial school enrollment. Ideally, a pre-vocational program must be provided in which the handicapped acquire interests, skills, attitudes, and knowledge necessary for later, successful occupational adjustment. This calls for a curriculum design which is carefully articulated between vocational-technical and special education personnel.

This section presents and reviews programs and services appropriate for handicapped secondary students who cannot succeed in regular vocational education without program modifications or providing special services.

There are two questions which may concern vocational educators as they plan to serve handicapped persons. The first question is:

> "For handicapped students who frequently possess serious deficiencies in general skills, should the vocational program be provided with segregated classes or should such youth become a part of an integrated program?"

The answer to both parts of the question is "Yes." The problem is one of planning and developing administrative structures that will enable individual adjustments to be made rather than requiring the individual to do all the adjusting to the preconceived programs and instructional levels

The following chart illustrates increments of educational segregation and integration of the handicapped:

INCREMENTS OF EDUCATIONAL SEGREGATION AND INTEGRATION OF THE HANDICAPPED[1]

Segregation	Institution
	Special School
	Special Unit
	Special Class (self-contained)
	Special Class (with children participating in 1 selected activity)
	Special Class (with children participating in 2 selected activities)
	Special Class (with children participating in a number of selected outside activities)
	Regular Class (with resource room)
	Regular Class (with resource teacher)
	Regular Class (with instructional grouping)
	Regular Class (with selected instructional grouping)
Integration	Regular Class

It is possible for any one youth to be served in several of the programs during his tenure as a student.

Handicapped youth in the secondary school have frequently been denied meaningful vocational-academic exposures. Often separate systems have been established for these students. In some of these separate or segregated programs, vocational educators limit training to activities which may be far below the individual's potential and remove him from the social mainstream of the school.

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[1] G. Orville Johnson, "Integrated and Segregated Vocational Education Programs for the Handicapped." Paper read before the National Conference on Vocational Education of Handicapped Persons, Pittsburgh, Pa., February, 1969.

> "School districts often build area vocational technical schools for the intellectually capable, special skill centers for the mentally sub-normal, scholars programs for the intellectually gifted and programs with great ambiguity and little direction for the majority of students. It is interesting to note that all of the programs function as if they were housed in separate agencies and dealing with different species of human beings."[2]

A major concern should be to avoid locking the handicapped into a rigidly prescribed program. Ideally, through the support of regular evaluation and counseling, their needs will dictate specialized services.

The second question which may concern the vocational-technical educator is:

> Are there common needs and characteristics of the handicapped students that should be recognized as we plan his program of services?

The handicapped person:

1. may fail to possess feelings of personal adequacy, self-worth, and personal dignity; may have failed so often in school that he is provided with a feeling of hopelessness. May also be unable to accept the disability which has been reinforced by society's negative stereotyping.

2. may frequently be a disabled learner limited in his capacity to master basic communication and computational-quantitative skills.

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[2] Jerry Olson, "Implementing Programs to Serve the Handicapped: Some Concerns and Considerations," Paper read during the National Conference on Vocational Education of Handicapped Persons, Pittsburgh, Pa., February, 1969.

3. may have limited mobility within his community and thus have little knowledge of not only the mechanics of getting about, of how to use public transportation, but will lack important information regarding the community's geography, institutions, and places of commerce and industry. As a result, he may not view himself as a part of his community.

4. may possess personal-social characteristics which interfere with his ability to function satisfactorily in a competitive work setting.

5. may be affected by chronic illnesses and by sensory-motor defects which reduce his effective response to training and placement.

6. may possess physical characteristics which can elicit rejection and can be viewed by peers, teachers and employers as unpleasant.

7. may lack goal orientation and particularly that which relates to selection of an occupational training area and the anticipation of fulfillment in that area.

8. may have unrealistic notions as to what occupational area would be most appropriate.

9. may lack exposure to worker models. This is particularly true of the large number of handicapped youth whose families receive public assistance or who are plagued by chronic unemployment.

RECOMMENDED PROGRAM COMPONENTS

PRE-VOCATIONAL EVALUATION
COMMUNICATION SKILLS
COMPUTATIONAL AND QUANTITATIVE SKILLS
OCCUPATIONAL INFORMATION AND CIVIC
    RESPONSIBILITY
SKILLS TRAINING (OJT-TRAINING)
PLACEMENT AND FOLLOW-UP

Pre-Vocational Evaluation as a Major Function

An on-going comprehensive, diagnostic service is needed in the program to give both student and staff members regular and repeated appraisals of vocational direction and potential. This will be referred to here as pre-vocational skills evaluation. The vocational educator will need to be involved to understand this process. While pre-vocational evaluation is probably accomplished best when staffed by personnel specially trained in that area, the continued and shared assessment of each student's employability characteristics is ever present in each service area of the program and is one in which the student is always deeply involved.

Pre-vocational evaluation is an integral part of the total habilitation process. It provides comprehensive assessment of the student's potential aptitudes and interests prior to any training and placement. It functions to give meaning and direction to curricular efforts as they relate to the program needs of individual students.

What Will Be Evaluated?

1. Basic Academic Skills Related to Communication, Computation, and Quantification:

    - Reading, writing, alphabetizing, self-expression, listening, counting, ability to make serial arrangements by number, measuring length and weight, making change, telling time, etc.

2. Skills Related to Work Performance in the Follow-Up Job Activities:

   - Assembly and disassembly of gas engines, electrical motors, etc.
   - Stitching, threading and operation of sewing machine
   - Clerical tasks such as filing, envelope stuffing, sorting, packaging, knotting and tying.
   - Custodial tasks
   - Recognition and use of basic hand tools
   - Landscaping tasks
   - Simple preparation of food
   - Warehousing tasks

3. Personal-Social Skills

   - Ability to get along with peers and with those in authority
   - Ability to work without constant supervision
   - Punctuality and attendance
   - Stick-to-itiveness (perserverence)
   - Cleanliness, grooming and general appearance
   - Courtesy and acceptable manners

4. Skills Related to General Work Orientation

   - Ability to remember work procedures
   - Adherence to safety rules and observance of caution
   - Following directions
   - Ability to move about the community and use public transportation
   - General physical health
   - Consumer "sense" (ability to make wise purchases, to understand relationship between work done and money earned.)
   - Degree to which student understands relationship between his training potentials, opportunities and eventual placement
   - Student's understanding of occupational or job information

Who Will Evaluate and Where Will It Be Accomplished?

Pre-vocational evaluation can be provided in facilities operated either by the public schools or by a private agency. When carried on in the school, vocational educators have the facilities and the skills necessary to aid in the provision of this assessment. Working in close cooperation with a special education teacher and a vocational rehabilitation counselor, an assessment schedule can be developed with each staff member undertaking specific portions of the process.

Since vocational educators are usually aware of the levels of skills necessary to obtain employment in a specific occupation, they can help to develop precise evaluation tasks. If a boy is to be successful as an auto mechanic, he will be expected to have an interest and aptitude in working with selected tools common to that area. The vocational educator can help to determine if the boy can use these tools or has the potential to learn to use them after a reasonable period of training. Similarly, there is a reading vocabulary associated with each given area. The determination should be made as to the training needed to familiarize the boy with that vocabulary. The resulting training might jointly involve the vocational educator and the special educator.

In any occupation there are personal and work adjustment skills associated with the job. Working cooperatively,the vocational educator, special educator, and rehabilitation counselor can examine the student's present level in relationship to these skills and devise a training plan to remediate any deficiencies.

For some programs for the vocational education of the handicapped it will be feasible to identify a classroom or shop area as a pre-vocational evaluation laboratory where students can be observed and evaluated under formal and controlled conditions. In such a laboratory setting, there is assembled a variety of tools, materials, machines and equipment used to assess eye-hand coordination, perceptual abilities, sorting and size discrimination, use and familiarity with basic hand tools, simple clerical tasks, assembly and disassembly of mechanical devices including varieties of gasoline engines, generators, electric motors, and appliances. Vocational educators are ideally equipped by training to operate such a facility. In order to more effectively operate such a laboratory, it may be helpful for the vocational education teacher to receive specialized and short term training at such schools as the Institute for the Crippled and Disabled in New York City.

When the pre-vocational evaluation is done outside the school, recommendations for a student will be made to the schools regarding the development of a training plan for him. This plan may include assessment of an individual's potential to be trained in a specific occupational skill.

An Example of Pre-Vocational Evaluation Performed by the School - Detroit Public Schools

The Pre-Vocational Evaluation Laboratory

In the Detroit Public Schools the Special Education Vocational Rehabilitation Program serving handicapped youth, trained vocational evaluators provide with complete staff cooperation, a regular sequence of evaluating, profiling and programming. Much of this assessment is accomplished in an area designed and equipped for this purpose. Students are regularly referred to this laboratory on an individual basis for formal evaluation of varieties of employability characteristics. Equipment common to many occupational areas is present in this area. These include all basic handtools relating to building and automotive trades as well as materials and equipment common to clerical, custodial and health service occupations. Tests and evaluative devices relating to perceptual abilities, sorting, color and size discrimination are also part of the pre-vocational evaluator's equipment. Results of these evaluations are shared with all school staff and form an important part of the total and ongoing assessment out of which the programming and prescriptive teaching evolve.

The Contract Work Shop

Another important source of evaluations of student's employability is provided through the observation of students as they work in the contract workshop. Here, a large area of the school is especially designed and set apart as a simulated small factory setting. There is nothing in this work milieu to suggest school-like characteristics. Handicapped youth are employed here and receive payment for work done. The contract work is of a wide variety and is secured from industry in and around the Detroit area. Much of it relates to the automobile industry and involves assembly and disassembly, inspection, sorting, wiring, soldering, riveting, drilling, deburring and packaging. All students participate in all operations unless specifically excused.

Care is taken to provide handicapped youth with all of the different operations so that each is given an opportunity to develop varieties of manipulative skill and to determine his own levels of competence and work tolerance. An important function of this workshop is to provide for the development of good work habits and acceptable social skills. While these youth readily accept the idea of receiving pay, initially most find it necessary to make drastic changes in their concept of what constitutes work done for this pay. In assembly line operations, the disabled youth quickly learns that satisfactory production and earnings depend upon each worker completing his operation with a degree of rapidity and skill. Youth also learn that an argument or disagreement can affect individual earnings of the entire group. Habits of punctuality and attendance are more rapidly acquired when it becomes apparent to the young worker that tardiness and absence reduce earnings. This is seen to be a strong motivating factor in the youth's development as a worker. The reader's attention, however, is called to the fact that this simulated factory, this work setting, serves as an ideal adjunct to the total pre-vocational effort carried on in the school. The workshop supervisor, a vocational education teacher, regularly supplies the staff with a systematic appraisal of the progress of the job operations to be performed.

The simple instrument used to convey this information consists of the following four point rating scale covering the following four general areas of work adjustment.

1. Performance skills -
   These include dexterity, decision making, remembering procedures and locations, following directions and observance of safety rules.

2. Work Tolerance -
   Considered here are such factors as tolerance for repetitive or monotonous tasks, physical stamina and resistance to fatigue.

3. Time Factors -
   Within this category are such factors as attendance and punctuality, speed and consistency, and the ability to perform several operations within a brief period of time.

4. Social Skills -
   Here the concern is with the degree to which the handicapped youth relates satisfactorily with peers, possesses an acceptable appearance and accepts the authority and direction of the work supervisor.

Job-Try-Outs (Work Experience)

Another major point of work assessment is accomplished by way of a series of job-try-outs assigned to the handicapped youth following his exposure to the contract workshop.

Based upon the findings of a series of concentrated evaluations in given occupational areas, an appropriate job-try-out site or station is chosen by and for the student. Normally requiring 4 weeks for completion,the job-try-out consists of a 4 hour per day, 5 day per week sampling of the nature of a particular occupational area. These job-try-out stations could be in the school or in the community. The job-try-out does not constitute a success-oriented or job-training sequence, but an opportunity for the youth to react, in terms of his interest and aptitude to a particular entry occupation. This also constitutes for most handicapped youth the initial exposure to the real world of work. Prior to beginning the job-try-out the pre-vocational evaluator reviews with the youth and "employer" a description of each disabled youth.

A time for arrival and departure is established. The "employer" is helped to understand the procedure in providing consistent evaluation and supervision of the client assigned,as well as the legal relationships, between the school and the "employer." Youth are often overwhelmed by fears associated with getting to and from the job, of adjusting to the establishment of new personal relationships and of viewing themselves against the background of a real work setting. Both pre-vocational evaluators and counselors make regular visits to the job-try-out site,securing the "employers" evaluation and in regular intervies giving support to the student and his "employer."

An Example of Pre-Vocational Evaluation - Performed by a Private Agency, The Vocational Rehabilitation Center, Pittsburgh, Pa.

This agency provides comprehensive vocational evaluation and adjustment services including testing, pre-vocational work experience, counseling and guidance, casework training, and job placement.

For the past five years, the Vocational Rehabilitation Center has provided pre-vocational evaluation to handicapped secondary students referred by the Pittsburgh Board of Education. These services, provided from the 10th through the 12th grade, are planned to become an integral part of the student's school program. For 26 weeks, one-half school day is spent at the Vocational Rehabilitation Center and the remaining half in the school setting. Joint staff meetings between school, Vocational Rehabilitation Center staff, and rehabilitation personnel from the State agency (Bureau of Vocational Rehabilitation) are held regularly during the evaluation to communicate the recommendations and findings to teachers. This evaluation program is used as a basis for recommending possible future courses of action on behalf of the student. These recommendations typically include such directions as termination of schooling with occupational placement, vocational training, strengthening in communication or computational skills.

One of the major functions of the evaluation services of this private agency is to help the school personnel relate the vocational training needs of the handicapped student to the total school program. Teachers are helped to understand, through the aforementioned staffing, that specific areas of the student's communication skills or computational skills will need remedial attention. It should be noted that the public vocational-technical schools cooperate in providing evaluations in welding and other trade training areas.

ACADEMIC SKILLS

Handicapped youth, particularly those with learning problems, when placed in vocational training areas, frequently discover that the acquiring of a skill is dependent upon a higher level of academic competence than they possess. Such a handicapped student in an auto mechanics class may lack the ability to read the service manual or parts catalog, be unable to understand cubic displacement, or read a vacuum gauge. Likewise, this student in a food service training area may be unable to read recipes or have sufficient computational skill to manage problems in quantity cooking. To a lesser degree other deficits in writing, following directions, speaking, etc. can hinder a young person's success in vocational education.

The academic abilities related to skill acquisition are an integral part of the total program. The single most important concept to be remembered is that traditional concentrations on academic achievement are not required. Students should have functional use of those skills which will be needed to succeed in training. Academic skills are also important to the young person in general life adjustment.

An academic program must be relevant to the individual needs of each young person. A prescriptive approach to academic instruction assures that each person will have the opportunity for a sufficiently general program with specific concentration in areas of greatest deficiency or in an area vital to prospective employment.

The vocational educator can aid in the coordination of programs for handicapped individuals in academic and personal-social areas by cooperation with both the special education teacher and the student. Close liaison can be created through regular planning conferences where the total program for each individual handicapped student is worked out. Both vocational education and special education teachers can exchange information on academic and personal-social progress and plan prescriptive instruction.

Handicapped students with learning problems require considerable individual attention from an instructor in understanding basic concepts in communication, computation, occupational information, and personal-social skills. Teachers and counselors can provide the student with the opportunity to develop the skills which will be required for success in training and later work adjustment.

Communication Skills

Reference is made here generally to those competencies in reading, writing, listening, and speaking. Regarding the development of the handicapped youth's reading skill, teachers begin with the level of skill possessed and provide for improvement, keeping in mind that the primary concern is that youth's growth toward training and employability. It is important, for example, to know whether or not a person can read signs like Stop, Danger, Exit, Men, Women, and other everyday terms.

The individual should be able to recognize key words in application forms, tax withholding forms,and similar materials. There are words which are associated with equipment, instructions, and standards which should be recognized.

Commerically produced instructional materials are rarely as relevant as the teacher may need in specific teaching situations. For this reason, simple and efficient materials can be developed by the teachers as they are needed. These can be supplemented by remedial materials when adapted for use by handicapped individuals. Remedial materials are especially useful where a severe reading handicap exists.

Often young people are challenged and motivated by special interest publications such as Motor Trend, Hot Rod, Popular Mechanics and Popular Science for boys and Glamour, Seventeen and Ingenue for girls. Copies of Look, Life, Ebony, Reader's Digest and daily newspapers provide a wealth of valuable teaching material. The state driver training manual, in some states, motivates young people who are at an age where learning to drive is important.

There are many free or inexpensive sources of instructional materials. Many commercial firms (Kraft Foods, Dairymen's Council, Ford, General Motors and others) can supply high interest, low reading level materials. Labor unions similarily provide publications.

Audio-visual materials, when properly used can supplement a program effectively and help to train visual and auditory concentration so vital to learning complicated procedures in many occupational areas. Speaking skills can be developed through the use of tape recorders.

Speaking and listening skills are also taught through the use of group discussions and role playing situations. Topics should be chosen which are relevant to each person's experiences, either of an occupational or social nature.

Computational and Quantitative Skills

As in the development of communications skills, efforts to develop computational skills are vocationally oriented. In addition to those skills needed for a specific vocational area, students are taught to understand the computation of pay checks, and the deductions which are necessary. In addition, students need to manage some of the computational problems relating to social security, pensions, income tax, and insurance deductions.

Students should acquire the basic skills necessary for wise purchasing, budgeting, and financing. Young people are taught to save part of their income and should be familiar with banking procedures.

When students enter evaluation or training, both the level of performance and potential is assessed to assure that they possess computational proficiencies consistent with the level of aspiration and that appropriate remediation is made available.

Probably the most important arithmetic concepts associated with vocational education involve the ability to understand and use quantitative measures. These are among the most difficult abstractions for handicapped youth with learning disabilities. For this reason special attention is given to preparing the individual who must work with quantitative concepts. Special education teachers try to introduce quantitative concepts early in the child's school experience. From simple counting exercises, the individual is involved in tasks of increasing complexity with concentrations on knowledge relevant to daily living and potential occupational areas.

When assessing a handicapped youth's potential in a specific vocational area, the ability to work with quantities is given careful attention. Very often the individual can learn to deal with quantities, using contrived systems to make up for an inability in a specific area.

Where it occurs that a special education teacher may lack practical and work oriented experience necessary for the application of quantitative concepts, the vocational educator' may wish to assist in order to assure relevance.

Occupational Information and Civic Responsibility

This academic area offers the student an opportunity to become acquainted with varieties of occupations and his level of training as well as the rights and responsibilities of a citizen.

Using a "classroom in the community" concept, teachers and students regularly tour many places of employment in business, industry, institutions, government, etc. providing handicapped youth with a first hand exposure to the nature of a particular job setting. This allows the youth to view himself against the background of that work situation and to become familiar with the surroundings. It gives opportunity for handicapped youths to interview employers and employees and upon return to the school setting to engage in group discussion which results in aiding the youth in gaining more realistic self-evaluation and in achieving stronger goal orientation. Vocational educators can play an important role here in the selection of job site visits and in conducting group discussions both prior to and following the trips.

Extensive use of role playing is used to advantage particularly in practicing employment interviews, or in simulated discussions and conflicts between worker and foreman or between union steward and employer. Selected personnel can be brought into the classroom representing labor unions, employment service, insurance companies, social security administration, and vocational rehabilitation and invited to inform handicapped youth and discuss with them the rights and responsibilities of worker-citizens. Parents and other handicapped students can be profitably involved in vocational education programs as models and participants.

It is most necessary that these disabled students gain an understanding of the functions of our democracy and particularly an understanding of their civic duties and privileges. This is an area of study which can be reasonably and efficiently managed as a part of occupational information instruction.

Personal and Social Skills

Students can be helped through personal counseling and group discussion and the use of visual and other aids to a greater understanding of how employers expect their employees to be dressed and groomed. Beyond employer acceptance, good personal grooming habits are an asset to the self-concept of the individual. Instruction is given in the use of personal grooming aids, sewing, mending, and styling.

In addition to grooming, these young people need to understand the need for proper etiquette and personal behavior. Role playing, group discussions, and film strips can be effective teaching devices. These students need to be aware of appropriate conduct in public places. This can most adequately be taught through repeated exposures to varieties of social experiences in the community as well as in the school.

Handicapped students are often unaware of resources in their home communities which they might use for recreational purposes. This information needs to be made readily available to students through the school program.

Home and Family Living

There are many skills related to home and family which are incorporated into the school curriculum. These include domestic activities, budgeting, purchasing, and child care. In addition to instruction, these students often require guidance to resolve problems as they occur.

Skill Training

We have considered program services which provide employability training, accompanied by intensive and continued pre-vocational evaluation. Basic work skills were provided, as in the Detroit program, through paid work experience in a simulated factory setting. The series of job-try-outs provided further evaluation and employability training. Frequently these job-try-outs were provided in the school itself, as seen in the Oakland program. The reader's attention has been called to the fact that the academic portion of the program has depended for its content on teaching prescriptions provided by total school staff. We have noted that the academic content consistently relates to the work world and to the development of acceptable employability characteristics on the part of the handicapped youth. Reference has been made to the strong role the vocational educator plays in this pre-vocational, employability training phase as the youth is readied for specific skill training.

We shall now consider some guidelines for the vocational educator as he trains the handicapped youth for employment.

1. Train for the acquisition of basic employability characteristics.
2. Provide the academic teachers with information about the needs in academic skills as they relate to a specific vocational training area.
3. Train at a level of competency which matches the youth's potential.
4. Train in an area where the student can master a skill which is saleable.
5. Where possible, combine training in the school with on-the-job training.
6. Be prepared to provide for shorter instructional periods and for longer total time for course completion.
7. Be prepared to repeat segments of instruction, particularly for those students who possess learning handicaps.
8. Make provision for individualized instruction.
9. Utilize demonstration lessons and manipulative endeavor in the case of handicapped students with learning disabilities.
10. Provide for frequent reinforcements of student's progress in learning situations.
11. Make certain to treat all aspects of a learning situation; never take for granted the occurrence of incidental learning.
12. Place great emphasis upon safety procedures and caution in the use of tools and equipment.
13. Ensure an emotionally stable and predictable training environment.
14. Make copious use of the pre-vocational evaluation and the vocational counselor's support.

We are ready at this point to focus on that portion of the program which deals with the provision of specific skill training.

An example of Skill Training - The Detroit Special Education Vocational Rehabilitation Program

In the Detroit program a training and placement counselor, working in concert with the pre-vocational evaluator, rehabilitation counselor and student, selects for the youth either a vocational training school placement or an on-the-job training station. Employer-trainers in the community who agree to train students are helped by the placement counselor to understand the characteristics and needs of individual trainees. This placement counselor interprets to the trainer special needs related to the student's physical handicaps or perhaps to a reading disability which might limit functioning in a particular segment of the job training. The trainer receives a training kit which includes a description of the school program goals, the trainee's payroll* schedule, a time report and a training progress report. During the initial weeks (total training time 13 to 20 weeks) this placement counselor visits weekly with the trainee and his trainer, reviewing progress and helping to solve problems expressed by either party.

The average daily OJT schedule consists of a 4 hour work day, 5 days each week for 13 to 20 weeks. During this period trainees return to the school for employment counseling which is provided by the placement counselor.

In the case of trainees assigned to a vocational school program, the placement counselor, again with the support of pre-vocational evaluator and rehabilitation counselor, selects the appropriate facility, establishes a working relationship with the school staff, and regularly evaluates with them the progress of the student.

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*Money which is received by the student is interpreted not as earned money but as a maintenance fee covering cost relating to food, transportation, etc.

Placement

Throughout the training sequence, the goal of job placement in the community should be considered. The student is being prepared to take a job which is consistent with the training received, personal interests, and with an opportunity for advancement. Since the placement coordinator has been deeply involved in the total sequence of the program, the student's needs and potentials are familiar to him when the time for job placement arrives.

When a student is being considered for placement, several steps may be taken. First, the student's cumulative record is evaluated. This record will include all of the information which has been gained through pre-vocational evaluations and the training sequence. Second, prospective jobs are profiled, listing all requirements for the job. This profile is very specific, so that the individual and the job can be compared. The student plays an important part in the decision-making process to assure that the job is acceptable.

Various resources are available to aid the process of finding a job which is appropriate. The Bureau of Vocational Rehabilitation has resources available to assist. The State employment agency in most states has at least one person charged with the responsibility of arranging job placements for the handicapped.

Job placement for the handicapped in the community requires the selection of employers who will accept disabled youth. Careful consideration should be given to all variables which might affect success. The young person is told what is expected and should have a desire to take the job. Similarly, the prospective employer and his staff are given a profile of the person's potentials and should be willing to work closely with the person, the placement coordinator, and other personnel. The family is constantly involved and their willingness to accept the placement is obtained.

Knowing what a job is about entails considerably more than just understanding the specific tasks to be performed. Hopefully, the young person possesses sufficient skill to get to and from work, to work with others, to work under supervision, and other related skills. The placement coordinator works with the handicapped student to relate specifically to the new job. If the employer has an orientation program for new employees, the placement coordinator should be prepared to interpret it for his new student-worker. Where none exists, the placement coordinator and the employer should work out an individual orientation sequence.

Whenever possible, the employer should take special care to demonstrate all details of the new job prior to placement. This reinforcement is often reassuring to the student. Following the demonstration the student may be given an opportunity to perform the tasks involved. This will serve to reinforce the student's self-confidence.

The student is familiarized with those parts of the physical plant in which he will work. The handicapped student should know the location of the lunchroom, the rest rooms, the payroll office, the medical section and other facilities. It should not be assumed that most handicapped persons will learn these things incidentially. They may be shy, embarrassed, or not even knowledgeable that certain facilities or services are provided.

When the student is introduced to co-workers, the personal dignity of the individual must be maintained. Co-workers may be either helpful or hostile to the handicapped worker, depending often on the manner in which the new worker is introduced. The very fact that a third person (the placement coordinator) is present, indicates that this person is unique.

Follow-Up

The job of the educator and of the vocational rehabilitation counselor does not terminate with the placement of a handicapped youth. This phase of the total sequence is so vital that some authorities look upon the early months of placement as an extension of the training program. The placement coordinator attempts to anticipate problems before a situation becomes bad enough to be irreversible. As with the evaluation and training sequence, follow-up is a team process involving the former student, the parents, the employer, and the school. These individuals, working together, can solve problems before they grow and steps can be taken to remediate deficiencies.

The vocational educator can profit from keeping abreast of the follow-up efforts. Since the objective of vocational education is employment in a job consistent with training, the vocational educator will want to see how the alumni of the program adjust. The feedback from the follow-up program will be used to modify programs to reduce deficiencies. This is especially true as the vocational educator seeks to serve the handicapped. Further training may even be indicated and the opportunity provided.

PROVIDING SERVICES IN RURAL AREAS

Small communities, removed from proximity to large urban areas with their multiplicity of available services, are faced with compound problems as they try to provide vocational services for the handicapped. The four most prominent problems concern the sparsity of the handicapped population, transportation, placement opportunities, and the availability of resources.

Once a rural school district has committed itself to vocational education, it sets about the task of making those decisions necessary for program implementation.

1. How will the services be organized?

2. What programs will be offered?

3. What students will be served?

4. What will be the sequence of service to a student?

Each of these decisions is based on a realistic appraisal of local needs and goals. Often the decision-making process involves school personnel, civic leaders, representatives of business and industry, and others who can contribute ideas and information.

Unfortunately, these committees may not include a special educator or a vocational rehabilitation counselor. This is not unusual, since in some rural districts special education might exist as the part-time responsibility of a staff member and the vocational rehabilitation counselor operates out of a district office located in a metropolitan area, removed from the area by some distance.

However, if the program is to consider the needs of the handicapped, these professionals should be sought out early and their advice and counsel carefully considered. Once programs are in operation, the difficulty of effectively serving the handicapped increases. Those planning the programs should be made aware of the needs of this population, and convinced that it should be served, before the plans reach the stage of implementation.

As in more populated areas, the educable mentally retarded will form the largest single block of the handicapped. Since special education is often not well developed in rural areas, there is a great likelihood that many such youngsters will be found in the regular grades, in trouble in their course work and in danger of dropping out of school. Most of these students will be functioning as anonymous, if somewhat troublesome, members of the student body at large. If they are taken into vocational education without proper evaluation, they may possibly experience failure there also.

It is incumbent upon special education, vocational education, and vocational rehabilitation to coordinate their efforts to identify those persons who may be suspected of possessing some disability, and arranging for a thorough examination by the school psychologist, vocational rehabilitation counselor, or another appropriate source. Once eligibility for service is determined, the vocational rehabilitation counselor arranges for a complete pre-vocational evaluation. The identification process requires that the available records of all students be examined by the counselors, psychologist, special education administrator, vocational rehabilitation counselor, pupil personnel representatives, or others who could be expected to have knowledge about the existence of persons with handicapping conditions. The important consideration is not specifically how the search is accomplished, but rather that it is not left to chance.

Once the vocational rehabilitation counselor accepts a student as being eligible, the next step involves deciding on how best to secure a pre-vocational evaluation. The two most plausible alternatives are to have the evaluation done by the schools or to contract an agency in the nearest city, having the person go to the agency and live in housing arranged by the agency. Wherever possible, the former is desirable, as the individual can remain in his home and can continue to take part in others areas of the regular program.

If this alternative is chosen, school personnel representing vocational education and special education can cooperate in the establishment of a pre-vocational education laboratory. In another section of this document the components of the program have been outlined. The resources of the vocational education departments of the school could provide the setting for the evaluation, with representatives of both departments cooperating in supervision and administration. Following the evaluation, representatives of both departments can meet with the vocational rehabilitation counselor to develop a training plan.

In some cases, this training plan may include participation in vocational education as a full-time student. In other cases, the student may remain in special education and only participate minimally in vocational education at a pre-vocational exploratory level. A third possibility may be removal from school entirely for participation in a non-school related training program.

Some adjoining school districts may find that the most efficient plan for the implementation of services is to combine their services in a regional vocational education center. This will not essentially change the pattern which has been outlined, but it does create problems of management. In a regional setup, the vocational educator cannot participate as actively in the case finding process. Similarly the problems of coordination of efforts increases significantly. When this is the case, the means must be found (possibly through financial support from vocational rehabilitation or under the 1968 Amendments to the Vocational Education Act) to plan a pre-vocational evaluation in the regional center. The cost of this service might be partially borne by the cooperating school districts. In lieu of this, a member of the regional school center staff might receive training in pre-vocational evaluation and serve in the capacity of an evaluator.

One specific example of a way in which rural school districts can provide upgraded services to students in schools which are geographically dispersed is through the use of a mobile evaluation laboratory. The Champaign, Illinois public schools operate such a facility.

The MOVEX Laboratory, Champaign, Illinois*

The MOVEX (mobile vocational experience) laboratory is a large van, containing a complete assortment of offset print-shop equipment (very much like the other workroom). It's air conditioned and heated. Its electrical system can be plugged into outlets at schools.

The MOVEX program is designed to keep handicapped youths from dropping out of school by offering them a better model for a job than that to which they are customarily exposed. The students are given early and intensive work experience in the field of visual communications, an area they would generally not consider a potential job source.

The program is available to junior and senior high school students who are considered disadvantaged. The MOVEX vehicle was delivered to the district last spring and 18 youngsters used it. It is now in full use. The vehicle is usually driven to the two high schools and three junior high schools every day. Participating pupils use its facilities during class hours for work experience credit. Often, they work in it at night, when it is parked outside the offices of the special services department.

Such a laboratory might also house a portion of a pre-vocational laboratory or many other types of vocational experience. The Division of Vocational Rehabilitation can support the cost of such a laboratory for use by handicapped students.

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*"Reprinted from the Oct. Nov. Dec., 1967 issues of School Management Magazine.

COMMUNITY INVOLVEMENT IN VOCATIONAL EDUCATION SERVICES FOR THE HANDICAPPED

The success of handicapped persons in making the transition from school to the world of work very often depends on the extent to which the people around them accept and understand the special adjustment problems they face. Parents, prospective employers, resource agencies, and the student's peers must smooth the path at appropriate points and not pose unnecessary obstacles to vocational adjustment.

The community is made up of individuals, families, groups, and organizations which have planned or incidental contact with handicapped persons to the extent that they influence the course of their lives. In one typical work-study program, a bus driver for a public transportation company was so unpleasant with his handicapped riders that their absenteeism was measurably increased. This incidental contact had a demonstrable effect on students at a critical point in their training.

The Family

One common example of an unnecessary obstacle involves families whose vocational schedules may conflict with the handicapped student's training or employment. Consequently, the student may be forced to choose between his training or employment and the natural desire to vacation with the family. Frequently, this problem can be solved through parent counseling and by parent involvement in total program development.

In order of priority, the family will have the most direct influence on the adjustment of a handicapped younster. The staff, especially the counselor, can contact the family early and assure at least their cooperation in the decision-making process. Hopefully beyond this, their active participation can be obtained. Parents can help their youngsters learn to use public transportation, to effectively spend and save their wages, and to make constructive use of leisure time.

Staff members often find that they must first prepare the parents for these major steps before the staff can work with the student. As an example, if parents reject the notion of their youngster using public transportation, the counselor might work individually with the family and bring them into contact with other families who have resolved this situation satisfactorily. Staff, working with the families of handicapped youngsters, might bear in mind that parents may not have had the opportunity to objectively formulate their goals and their strategies for preparing their youngsters for post-school adjustment. The staff should stress that the ultimate goal of training is vocational adjustment. The parents' sources of information may vary from qualified professional assistance to the friendly advice of well meaning neighbors. Parents are typically confused and possibly even bitter. For this reason, extreme care should be exercised to remove their anxieties and to offer supportive counseling.

Advisory Committees

Parents can serve as useful members of a program advisory committee. While the responsibility and authority for program implementation rests with staff members, some fine ideas may result from parent involvement. Parents can assist staff members in informing other parents and the larger community of program innovations. Besides parents, such committees should also consist of other interested and responsible local people such as civic leaders, clergy, and business and labor leaders who can help assure relevance of the program to local needs and to offer bridges of communication between the program and the community.

Organizations concerned with the Handicapped

Parents of the handicapped have in most parts of the country formed branch chapters of national organizations. These groups, primarily concerned with a specific handicapping condition, have rendered invaluable service at the local, State, and national levels. Through their efforts they have made material available which describes the needs and characteristics of handicapped persons, and which promotes their cause to business, industry, and labor. These parent groups also sponsor sheltered workshops for employment and training of the handicapped, recreational activities, and other needed services.

In addition, professionals who are concerned about the handicapped have joined together for many of the same purposes. These professional organizations publish journals which practitioners find helpful. Vocational educators can profit from involvement in these parent and professional organizations serving the handicapped.

The Business and Labor Communities

Those in the community who are most able and willing to help with the handicapped often need reliable sources of information about the handicapped. For this reason, high priority should be given to dissemination of such information about the handicapped. Professionals working toward the preparation of the handicapped for employment can make presentations of their programs to clubs and organizations, to personnel managers and supervisors and employers.

When programs are organized, the counsel of the business and labor communities should be sought. Utilizing such advice of business and labor leaders will assure relevance to present and future community needs. When an occupation becomes obsolete, or when attitudes toward the handicapped filling particular positions are negative, then appropriate modifications need to be taken. For example, some of the mentally retarded can be trained as key punch operators and when given proper preparation, they can be as rapid and reliable as the non-handicapped.

In some instances, unrealistic entry barriers or resistant supervisors have unnecessarily restricted work opportunities. When this is the case, appropriate orientation programs might be undertaken to assist employees to understand the potentials and limitations of the handicapped people involved.

The Communication Media

The communications media are an essential component of community involvement in a program. When the needs and potentials of the handicapped are presented, the probability of community attention to this population can be increased. Newspapers and radio-TV are often quite responsive to this type of "human interest" features. When these media are used it should be remembered that one program cannot modify the attitudes of significant numbers of people. For this reason care should be taken to avoid generalizations about handicapped persons which will do little to serve the desired purpose of the program. For example, it should be pointed out that all mentally retarded are not alike. They are as different as people in the general population. The public, and especially employers, should not be led to believe that they can predict the success or failure of any single retarded worker.

Site Visits

Many places of employment will be willing to provide the opportunity for site visits for trainees. The most profitable trips will be those where the student will be able to encounter wide ranges of occupations. Discussion sessions can be arranged with supervisors and workers who can share information about their particular work assignment. When these trips are planned parts of the total program, staff members will wish to coordinate the planning with appropriate personnel at the site.

Recreational Facilities

There are many recreational facilities which can be effectively used by the handicapped. Service clubs and organizations in some communities have established programs which are specifically designed for the handicapped. Public agencies and facilities such as libraries and recreation departments of many communities offer opportunities for the use of leisure time.

There are camps for the handicapped operated by parent and professional organizations which offer a wide variety of programs. These groups also offer a range of other activities for the handicapped. There are some bowling alleys and swimming pools which have made special accommodations for the handicapped.

In most communities business establishments which specialize in recreational activities, can arrange for groups of students to be tutored in skills which will enrich their non-working hours and increase the probability of satisfaction with their post-school life. Since the primary purpose of any vocational preparation program is employment, the social activities should serve as an adjunct and be conducted after normal working hours.

CONSIDERATIONS IN PLANNING VOCATIONAL EDUCATION FOR THE HEARING IMPAIRED

Planning instructional programs for hearing impaired young people should be approached carefully and systematically. A well coordinated and comprehensive plan is necessary in order to provide for a number of existing differences: (1) in the degree of hearing loss encountered among these young people and in its handicapping effect; (2) in the numbers of hearing impaired students in the community; (3) in the availability of existing resources; and (4) in the possibilities of developing new programs and new cooperative arrangements. Once these considerations can be managed, the over-all objectives for hearing impaired students remain very similar to those for the hearing students--including economic independence, community involvement, marriage, and family participation, and other commonly held aspirations. It is particularly encouraging to remember that these hearing-impaired students, ranging from mildly hard of hearing to something approaching total deafness, can and usually do achieve these goals. In fact, of all handicapping conditions, hearing impairment probably interferes least with the individual's independent participation in society. The degree of this independence, however, results from very careful instructional planning.

Effects of Hearing Losses. In very general terms, hearing losses can be separated into those indicating a conductive loss and those evidencing a sensori-neural loss. In the first case, a number of treatments are available which may resolve the hearing loss entirely. For the rest of the students, appropriate amplification (a hearing aid) and classroom seating which permits visual contact with the teacher should allow satisfactory progress.

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*Written by William N. Craig, Ph.D., Associate Professor, Department of Special Education and Rehabilitation, University of Pittsburgh, Pittsburgh, Pennslyvania.

On the other hand, sensori-neural losses are rarely remediated through medical processes and present a different picture, a problem which is not resolved by amplification alone. With this type of loss, the ear tends to distort the sound it receives much the way a poorly tuned radio station distorts sound to the normal ear. That is, a noise is heard but it is so distorted that no message is intelligible. Of course, in extreme cases of deafness even the noise is not perceived. In these more serious hearing losses, an additional educational handicap results which is particularly affected by the age of the child when the loss occurred. A young person who has lost his hearing as a teenager may go through a rather traumatic adjustment period, but he does have access to normal speech and language development. This means that the modifications in instructional procedures can be minimized. A child whose hearing loss dates from early childhood, however, must rely on special tutoring, special language stimulation, and direct feedback from his teacher, parents and others in order to gain information about his environment. He is learning a language he cannot hear. He is also required to perform in school with a language which he understands only fragmentally. Fortunately, many young deaf people are able to overcome this problem and perform rather adequately, assuming that they have received expert instruction. In establishing a program for such instruction, all the preceding factors - the degree of hearing loss, the time of onset, and the relative handicapping effect - must be carefully balanced.

Population Density. For the incidence of deaf young people (with roughly 60 db losses or greater), one national estimate would place a projection of 7 per thousand. Although the actual figure may well be closer to 1 percent of the total school-age population, the relatively small size of this percentage indicates that smaller communities should be very cautious about starting "one room school houses" - one class emergency-type programs - for deaf children. In the first place, the age spread of these children is usually too great to allow for meaningful grouping in the smaller school, so that such a class for the deaf may include 7 students ranging from age 6 to age 14. In addition, vocational orientation and training should follow from a carefully planned program of study in English, life adjustment, arithmetic and related areas; and, for deaf students, the vocational preparation must be carefully built upon this educational-language background. Such a program requires specialized personnel and facilities which are usually available only in the larger community.

Given a proper background in the language-related areas, deaf young people should be able to perform in a very wide range of occupations including such areas as electronics, dentistry, business and printing. In order to provide the specialized support essential for the deaf student to maximally develop his skills and to utilize them within the broader community, it is frequently necessary to set up programs on an inter-community, regional or state basis.

Existing Resources. Educational and vocational resources for both the hard of hearing and the deaf students have increased greatly in the last few years. The Rehabilitation Services Administration, the Office of Education, State governmental agencies, and more recently the Vocational Education Amendments of 1968, have given a considerable boost to an already increasing momentum.

During the high school years, prevocational experiences are available in most day and residential programs for the deaf. It would, therefore, seem logical to provide additional support to these programs before contemplating an entirely new program. Even if a new program is being considered, it should be closely articulated with the existing programs in order to provide some reasonable continuity. Specialized or more advanced training in the vocational areas would readily be encouraged by all administrators of schools for deaf children as long as these new programs were well conceived and staffed with sufficient numbers of people who understood the problems of deafness. At the present, schools and classes designed for deaf students include some, but limited, vocational experience. In many instances, graduates of these programs are able to go on to more advanced programs with hearing students by obtaining support from the instructor directly. In other cases, a tutor or interpretor fills the gap. For the more talented deaf student, programs are available in regional technical-vocational centers located in New Orleans, St. Paul, and Seattle. Full four year college programs are available at Gallaudet College in Washington, D.C. and the Rochester Institute of Technology in New York State. Among the particularly talented deaf students (especially those skilled in language, lipreading, and speech), progress through colleges not specifically geared for deaf students has been possible. In more instances, progress through trade-technical training has been possible with only a minimum amount of specialized support.

New Programs and Arrangements. As previously suggested, the relatively low numbers of deaf students in separate communities encourages the extension and development of existing programs. In the case of a small day school for deaf children this might mean the employment of tutor-instructors in order to assure optimum integration of the deaf student in classes for hearing students. In a similar sense, large residential schools for the deaf need both improvements in the present vocational programs and extension of these programs into the working community. In other words, schools can provide a considerable amount of technical information, but they still need additional support from the community in terms of on-the-job training, supplementary vocational training, and adjustment to the world of work. For deaf students, planning for the actual contact with the business world is of critical importance since the face-to-face visual orientation of the deaf individual with his potential employer is the most effective way of bringing the classroom to the business world. This program can be planned into the regular school year as long as highly competent experts in deafness are available to the deaf student. No one plan will meet the needs of all deaf students or of all communities. Therefore, new programs and arrangements should be developed through a group of participants from the school, industry, training facilities, and other community and governmental agencies. This plan should fit the community both in terms of the deaf person's potential and of the employment condition within the region.

In conclusion, the social and economic objectives for the deaf student do not differ in essence from those of hearing students. The differences become one of making the same opportunities available to these students that are available to the hearing. This may mean extra time and specialized techniques, but the careful development of this potential can pay off in considerable benefits for the deaf individual and for the larger community. The importance of a well thought out, coordinated program in the schools is the critical link between the deaf individual and his full participation in the larger society.

CONSIDERATIONS IN PLANNING VOCATIONAL EDUCATION FOR THE VISUALLY IMPAIRED

There are two major considerations in planning vocational education services for the visually handicapped (blind or partially seeing). The first consideration concerns the visual functioning of the individual. Even though a student may require braille for reading, he may be able to use his residual vision to function in a vocational setting. A partially sighted student may have little or no difficulty in a vocational setting depending upon his visual ability as well as other individual characteristics.

When a vocational training plan is developed, all those concerned should be aware that the student's potential is not entirely determined by his visual deficiency. Just because the child is blind or partially seeing does not mean that he cannot respond to regular vocational training.

Sometimes the student can assist the teacher in an interpretation of his ability. While this is not always possible, the teacher should be aware of the fact that some students have had sufficient experience to add considerable insight to the evaluation process.

The second condition relates to the task which is to be done. Some tasks which are normally performed visually can be done tactually, or by utilizing the little residual vision of the individual. Some jobs can be physically adapted while others will require no modifications for the visually handicapped.

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*Written by Dr. Ralph L. Peabody, Associate Professor, Department of Special Education and Rehabilitation, University of Pittsburgh, Pittsburgh, Pennsylvania.

The teacher can obtain professional advice on task analysis and modification by consulting local rehabilitation agencies and other programs for the visually handicapped. In some states, a separate Bureau for the Blind replaces the Division of Vocational Rehabilitation as the agency concerned with the visually impaired.

Closely associated with the tasks to be performed is the environment. Proper lighting and acoustical treatment can facilitate job performance by the visually handicapped. Each area to be used by this population should be analyzed for safety features. The vocational education teacher can gain assistance from a teacher of the visually impaired, an orientation and mobility specialist, or a rehabilitation counselor.

The Association for the Education of the Visually Handicapped and the American Association of Workers for the Blind and the Library of Congress, Division for the Blind and Physically Handicapped are sources of information regarding vocational training of the visually handicapped.

The visually handicapped have proven themselves extremely competent in a large variety of vocational pursuits. The variety of successful vocational placements has been as varied as the individual capabilities of the visually handicapped person. All vocational education programs presently have potentiality for inclusion of visually handicapped students. The vocational plans for individual students will be very dependent upon the imagination, understanding, and sensitive observation of the professional educators involved.

CONSIDERATIONS IN PLANNING VOCATIONAL EDUCATION FOR THE PHYSICALLY HANDICAPPED

Vocational training for the physically handicapped does not differ in form drastically from programs for the other students. Most physically handicapped students can receive training in programs where they are integrated with the non-handicapped. An exception to this might be the student with severe cerebral palsy.

There are several groups of the physically handicapped which profit from vocational education training. Some of the more prevalent physical disabilities characterizing students in such programs are muscular dystrophy, spina bifida, osteogenesis, congenital deficiencies, amputees, spinal cord injuries, and students with cardiac problems. Rather than describe these conditions in detail we can point out that the teacher should be aware that these students may also have perceptual difficulties which could affect their rate of work and could cause safety problems in a shop. On the whole, these students can be expected to possess at or near normal intelligence. For most, their potential is in job areas which require only the use of upper extremities. Examples include clerical work, bench work, machine operation, and data processing.

The severely cerebral palsied student is multiply handicapped. Probably over 80% of these persons (1) have involvement in all four extremities, (2) are confined to a wheelchair, (3) have identifiable speech problems, and (4) have perceptual difficulties.

Severely cerebral palsied students may find employment in extended employment workshops; few enter competitive employment. In a sheltered workshop they can be paid at rates which are appropriate to their ability.

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*Written by Richard M. Switzer, Headmaster, Human Resources School, Albertson, New York.

Unless the numbers of physically handicapped students warrant staff therapists, occupational therapists and physical therapists should be retained as program consultants. If a vocational education teacher can learn to understand a disability, his creativity should enable him to make the needed modifications usually done by a therapist. As the vocational education teacher begins to prepare a physically handicapped person, he may seek consultation from an occupational therapist or a physical therapist. The program should also employ a physician as a consultant. A qualified doctor of physical medicine will be invaluable as a consultant to the program.

The staff needs in vocational education programs which involve the physically handicapped are not very different from other vocational education programs. The vocational education teacher can expand his skills in dealing with this group through field or in-service experience, and by observing occupational therapists for short periods. Occupational therapists are trained to work on small muscle activities to enable the individual to master the "activities of daily living," such as eating, dressing, toileting, and shaving. Occupational therapists analyze an individual's level of muscular functioning to decide what an individual can or cannot do. They also develop specialized training programs. Occupational therapists are skilled at developing devices to facilitate the acquisition of a skill which the individual could not attain without such a device. Vocational education instructors may profit from observing these modifications. These observations can be valuable when adapting tools or machinery to the needs of the physically handicapped.

The training program for the physically handicapped can be compatible with that for all other students. A detailed pre-vocational evaluation should involve exposure to all areas which might offer potential employment. These will normally tend to be in two broad categories, clerical and industrial. The clerical field can include a wide range of tasks from operating adding machines through complicated data processing programming. As data processing expands it is possible that even a homebound person might be gainfully employed as a programmer. The banking field offers a wide range of clerical opportunities for the physically handicapped.

Industrial training will usually require modifications to the tools and machines to be used by the students. A great many employment opportunities exist in electronics, appliance manufacturing and repair, and similar fields. An occupational therapist or a rehabilitation counselor should be able to assist the vocational educator and the employer in modifying equipment, both in training and later on the job, to fit the needs of the physically handicapped.

The teacher should be sure that necessary tools and equipment are modified to fit individual specifications. In addition to local consultation, the teacher may wish to consult one of the following organizations:

Institute of Rehabilitation Medicine
400 E. 34th Street
New York, N.Y.

Institute for the Crippled and Disabled
400 First Avenue
New York, N.Y.

National Society for Crippled Children and Adults
2023 West Ogden Avenue
Chicago, Illinois

There are a few special considerations to be observed in training the physically handicapped. It is important to be cautious of architectural barriers in the shop and throughout the building. The student should have easy access to facilities such as the lunchroom, lavatories, and lockers.

If the student has been homebound for any period of time, there may be gross gaps in his academic learning. For example, the student may be able to read, but not be able to read a ruler because of limited past experience. These students will require special remedial academic attention. For some students, long periods of inactivity at home or in a hospital may result in depressed intellectual functioning. Teachers, evaluators, and counselors should be cautioned against underestimating the student's potentials when that student has been confined for any length of time.

The physically handicapped student may be socially immature. Often these individuals have been sheltered and may not be able to make adequate social adjustments. Such students may require considerable encouragement.

The vocational education teacher needs to be aware that the Division of Vocational Rehabilitation can cover the cost of the modifications necessary to fit a program to a specific student.

PERSONNEL

INTRODUCTION

The focus of this report has been on improving programs to meet the future vocational education needs of the handicapped. But experience teaches that even the best of programs are dependent on quality of personnel available to conduct them. A trained and dedicated staff provides the dynamism essential to assure a continuation of high standards of quality.

The term "personnel" encompasses all persons involved in the planning, operation, or evaluation of the vocational education program. The personnel necessary for the vocational education of the handicapped may include teachers, administrators, counselors, supervisors, social workers, paraprofessionals and all others whose performance is required to operate a quality program. While the attention of this section will focus on local and State level personnel, the same general standards of professional quality apply at the national level.

This discussion of the topic of personnel focuses on three broad descriptive dimensions. While more detail will be forthcoming, for the present the headings are Personnel Preparation, Personnel Utilization, and Personnel Interactions. These dimensions have been chosen to emphasize the relationships that exist on this subject in time, cost, manpower, and inter-disciplinary cooperation. All of these variables require careful examination by professionals as they grapple with the problems of providing the people to staff vocational training programs which can be meaningful to the handicapped.

PERSONNEL PREPARATION

Personnel preparation calls for leadership in vocational training to initiate trends which will be most effective in the years ahead, rather than at present. There are three distinct levels at which personnel preparation must be discussed. These are pre-service training, in-service training, and staff development.

Pre-Service Training

For many reasons the preoccupation of special educators through the years has been on early education, usually at the primary and intermediate levels. Course work has centered on the introduction of tool subjects and social skills to young handicapped students. Attention that might have been given to vocational preparation was often absent. Vocational rehabilitation counselor training programs have, in the past, concentrated on the older worker who has been employed, suffered physical or mental damage, and now requires counseling and therapy to re-enter the world of work as a contributing member of society. Such training programs hardly apply to the handicapped youngster who is about to leave school at a chronological age often lower than his non-handicapped peer, but lacking the physical or mental capacity to compete as an equal. Vocational education training programs frequently have not offered potential instructors opportunities to learn about the needs of the handicapped.

Pre-service training programs in all three fields can provide a substantial service to teachers preparing to work with adolescent handicapped by expanding their programming to incorporate the needs of this group. This might be accomplished through course work, practicums, student teaching, and internships focused on this group. Since all three fields are to be expected to cooperate for effective service at the community level, it would not seem unreasonable to assume that joint efforts could be undertaken at the college or university level. Students might be given training and exposure in all three fields through experiences conducted jointly by the faculties. While the student might continue to major in one speciality, a breadth of understanding could be obtained which would serve him well as a practitioner.

Some of the common elements which should be included in projected teacher training programs to make them relevant have been pointed out by Johnson. *

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*G. Orville Johnson. "Report of Interdisciplinary Workshop for Special Education and Vocational Education Teachers," The Center for Vocational and Technical Education, The Ohio State University.

Broad general areas to be considered in personnel preparation:

(a) The type of vocational education program that is feasible for the handicapped student is based upon his personal characteristics as well as his potential for work success as far as the areas of academic and psychomotor skills are concerned.

(b) Provisions must be made to train the personnel to consider the various behavioral aspects of the students, not just the narrow learning of academic skills.

(c) Personnel must be taught to identify the specific vocational experiences that will be of the greatest value to the individual student.

(d) Personnel must be prepared to make the best use of existing facilities and where possible, change or add to inadequate facilities.

(e) Sequential planning must be done in order to provide a systematic developmental approach to the instructional program.

(f) Personnel should be trained to utilize labor and industry in the program in order to effectively integrate within the educational team the community services and employment opportunities, that are and will be available to the students.

(g) Universities should be familiarized with the programs as they are developing so that they will be training educational personnel both in special education as well as in vocational education who are able to work in a cooperative, team approach.

(h) Specialists in the areas of education, rehabilitation counseling, federal and/or State employment agencies, social work, school psychology, sheltered workshops, and school administration are potential resource personnel to the teachers and the program in planning and implementing ways and means of achieving the various objectives of the programs.

(i) The need exists for a prescriptive approach to instruction in conjunction with determining the specific characteristics of the handicapped as well as the specific education objectives for each one of the handicapped.

One level where pre-service training is generally weakest is in supervision. A good supervisor offers necessary leadership to an instructional program in curriculum development, materials preparation and distribution, in-service education, and other important aspects of the total service. The supervisor often brings together isolated parts of a program and facilitates team work.

Regardless of the level of task performance within an organization, it is becoming increasingly evident that a staff member can no longer attach himself to one component of the educational program to the exclusion of all others. Workers are most effective when they understand the total system for which they are employed. This is not to imply that a vocational educator needs to be an expert on the handicapped. However, he should possess sufficient understanding to recognize the unique needs and potentials of these individuals. Pre-service education programs can contribute significantly to this understanding by facilitating the acquisition of sufficient knowledge as a part of the total program.

In-Service Training

Coupled with effective college and university programs there is a need for in-service programs within school systems which facilitate the acquisition of this knowledge by practicing personnel. The same general principles apply at this level as with pre-service training. Joint sponsorship of programs can lead to effective in-service experience. The use of in-service teams, which concentrate on program improvement rather than on staff development, if undertaken creatively, can serve to upgrade personnel and accomplish necessary program changes. Curriculum revisions, program planning, case studies, and other important projects can facilitate in-service education.

A profitable type of in-service training is to offer workshops which reflect the needs and interests of the school's staff. Planning together, the vocational education and special education departments of a school can invite resource people from universities and agencies to present material on vocational preparation for the handicapped, the characteristics of the handicapped pertinent to instruction, sources of training materials and other topics of mutual importance.

A wide range of new resources for in-service education have become available in recent years. Information resource centers, especially the ERIC network, are now becoming more accessible. (See appendix) Major publishers and other large corporations have entered the field with expanded material offerings. Federal and State funds are now available which can offer valuable assistance to support worthy efforts related to projects which school systems might wish to undertake. Administrators and supervisors responsible for in-service education can often supplement their own resources with those of governmental and commercial concerns for the improvement of their programs.

Staff Development

Staff development is the third area of personnel preparation. Here the educator returns for further study at a college or university, or for another type of personnel growth. Funds are available in all three fields to support these efforts. Educational Professions Development Act monies have recently become available to finance the preparation of ancillary personnel for the instructional program Funds from this source might be used to support the training of prevocational evaluators, counselors, social workers, and paraprofessionals in the knowledges required for vocational education of the handicapped.

Colleges and universities can facilitate staff development by establishing and improving the organization for training. Teachers

College, Columbia University, in New York City operates workshops and short-term training courses for a variety of professional personnel.

In addition to academic settings, staff development takes place in private or public agencies. Some rehabilitation agencies are noted for their efforts in providing training to persons interested in upgrading their knowledges. The Institute for the Crippled and Disabled in New York City offers workshops for professional personnel to improve their skills and obtain certification as work evaluators. Increased financial assistance might encourage other agencies to consider similar activities. Some residential schools for the disabled have work-study programs which might serve as a foundation for a staff development program.

PERSONNEL UTILIZATION

Cooperation, if it is to be meaningful, must be translated from positive attitudes into actual practice. Nowhere is this more obviously important than in the problem of personnel utilization within a school district or between districts. When a decision is made that a particular function should be a part of a school program, a question to be answered centers around who should do the work. While it is reasonable to assume, for example, that a special educator might teach a handicapped youngster to read, one cannot assume that the youngster does not read when he participates in other aspects of the school program. A blind student needs help with mobility in any part of the program. Pre-vocational evaluation has been spoken of as a team process.

These are concrete examples which will enable the development of a flexible concept of staff utilization. If, in fact, a special education teacher has aided a retarded student to learn to read in the special class, it is reasonable that the same teacher can assist the vocational educator who needs to teach the student to understand simple written instructions. The vocational education teacher cannot be expected to become a reading instructor.

Trained supervisors can offer constructive leadership in more than the field in which they are trained. Many common variables exist in special education and vocational education which make it possible for one person to provide effective leadership in both places on matters which relate to the vocational training of the handicapped. The proviso is that the supervisors have been offered sufficient experiences to assure adequacy in the leadership they offer.

Team teaching, modular scheduling, and individualized instruction are all concepts which have had an appreciable effect on staff utilization. As a result, staff members have more flexibility in establishing a working relationship with students. Frequently, a staff member has time available to work with students, improve aspects of a program, and conduct research, which can result in significantly improved educational opportunities for students. These advanced concepts of staff utilization can offer to a handicapped student the attention from a staff member needed to make an experience successful. This additional effort need not always take the form of direct student-staff contact. Opportunities for community involvement in student experiences require that careful planning and evaluation, coordinated directly with the community, be included as integral components of the total program.

Private service facilities can help to alleviate some staff utilization problems. These agencies include Jewish Vocational Services, Goodwill Industries, Community Health Centers, and hospital service centers.

Special education, vocational education, and vocational rehabilitation might wish to explore approaches which could result in the more effective utilization of paraprofessionals. These people should be recruited for positions which offer opportunities for personal advancement.

PERSONNEL INTERACTIONS

The third dimension for the discussion of personnel pertains to communication among personnel at the local, State, and National levels. In addition to communication within the education community, there is a real need to establish contacts with other components of the total community. These may include public and private agencies, social and religious organizations, and other interested groups. The points of contact can usually be found if a reasonable search is made. But, some important potential contributions to vocational training for the handicapped are not organized into the most meaningful units for easy access. Labor and industrial people are one significant example. Often the people who belong to management organizations, fraternal organizations, and similar groups are not the same people who can be most useful in securing the entre necessary for communication and action. To mobilize these people requires creative attention and transmitting a feeling that their cooperation is desirable and meaningful, rather than ceremonious.

Parents present another group which is difficult to reach and to mobilize. Often group meetings, if they are to be used, will have to be scheduled at times which are convenient to them. The management aspects of working with parents often are the key to successful experiences. Attention to problems of transportation and child care can often increase significantly the willingness of people to participate.

Communication and other interactions are dynamic systems which must have means of evaluation and quality control incorporated into the structure. When programs are designed there should be adequate provision for continuous evaluation to assure long-range effectiveness.

SOME SUGGESTED SOURCES OF TEACHING MATERIALS

Instructional materials centers, specifically for handicapped children, have been established throughout the nation. Purpose: to collect and to make available to local school districts, such teaching aids for handicapped persons as test kits, tapes, records, braille books and many other materials and devices. These centers also are involved in developing new materials and conducting practical workshops for teachers.

Address requests to the Regional Special Education Instructional Materials Center at:

Center and Director	Region Served
Michigan State University Room 216 Erickson Hall East Lansing, Michigan 48823 Director: Mrs. Lou Alonso Phone: 517/353-7810	Michigan Indiana Ohio
University of Wisconsin 2570 University Avenue Madison, Wisconsin 53706 Director: Dr. LeRoy Aserlind Phone: 608/262-4910	Wisconsin Minnesota
American Printing House for the Blind 1839 Frankfort Avenue Louisville, Kentucky 40206 Director: Mr. Carl Lappin Phone: 502/895-2405, Ext. 20	National

Center and Director	Region Served
Colorado State College Greeley, Colorado 80631 Director: Dr. William Reid Phone: 305/351-2681	Colorado Montana Wyoming New Mexico Utah
University of Texas 304 West 15th Street Austin, Texas 78701 Directors: Dr. William Wolfe Dr. Claude Marks Phone: 512/GR-1-3146	Texas Louisiana Arkansas Oklahoma
University of South Florida Tampa, Florida 33620 Director: Dr. Marvin Gold Phone: 813/988-4131	Florida Alabama Georgia Mississippi South Carolina Puerto Rico Virgin Islands
University of Oregon 1612 Columbia Street Eugene, Oregon 97403 Director: Dr. Wayne Lance Phone: 503/342-1411, Ext. 2021	Oregon Alaska Hawaii Idaho Washington Guam
University of Kentucky 641 S. Limestone Street Lexington, Kentucky 40506 Director: Dr. A. Edward Blackhurst	Kentucky Tennessee North Carolina West Virginia
University of Southern California School of Education 17 Chester Place Los Angeles, California 90007 Director: Dr. Robert McIntrye Phone: 213/749-3121	California Nevada Arizona

Center and Director	Region Served
Boston University School of Education 765 Commonwealth Avenue Boston, Massachusetts 02215 Directors: Dr. Donald Mietta Dr. Harold Ruvin Phone: 617/353-3266	Massachusetts Connecticut New Hampshire Maine Vermont Rhode Island
George Washington University Department of Special Education 820 20th Street, N.W. Washington, D.C. 20006 Director: Dr. Raymond Cottrell Phone: 202/676-7200	District of Columbia Delaware Maryland New Jersey Pennsylvania Virginia
University of Kansas School of Education Lawrence, Kansas 66044 Director: Dr. Robert Ridgeway Phone: 913/UN-4-3034	Kansas Iowa Missouri Nebraska North Dakota South Dakota
New York State Department of Education Bureau for Physically Handicapped Children Albany, New York 12201 Director: Mr. Raphael Simches Phone: 518/474-3995	New York State
Department of Special Education Superintendent of Public Instruction 726 South College Street Springfield, Illinois 62706	Illinois

Center and Director	Region Served
Directors: Mrs. Lenore Powell Phone: 217/525-2436 and Miss Gloria Calovini 410 South Michigan Avenue Chicago, Illinois 60615 Phone: 312/427-3387	Illinois

SOME SUGGESTED SOURCES OF ASSISTANCE

Although your own state department's special education section may be the best place to go for expert advice, there are also organizations in the field that can be most helpful.

Most of the organizations listed below are especially effective in providing information on individual handicaps. They will usually provide you with free printed materials and news of the latest developments in their special area. Some of them also have information on films that can be used to enlighten your community on the problems of the handicapped and to gain wider support for your program.

Mental Retardation

National Association for Retarded Children
420 Lexington Avenue
New York, N.Y. 10017

American Association on Mental Deficiency
1601 W. Broad Street
Columbus 16, Ohio

Speech

American Speech and Hearing Association
1001 Connecticut Avenue, N.W.
Washington, D.C.

Impaired Hearing

American Speech and Hearing Association
(above)

This material was taken from School Management Magazine, October-December, 1967.

Alexander Graham Bell Association
for the Deaf
1537 35th Street, N.W.
Washington, D.C.

American Hearing Society
919 18th Street, N.W.
Washington, D.C.

Conference of Executives of American
Schools for the Deaf
Gallaudet College
Florida Avenue and 7th Street, N.E.
Washington, D.C.

Emotionally Disturbed and Socially Maladjusted

National Association for Mental Health
10 Columbus Circle
New York, N.Y. 10019

Child Study Association of America
132 E. 74th Street
New York, N.Y. 10021

Child Welfare League of America
345 E. 45th Street
New York, N.Y. 10017

Impaired Vision

American Foundation for the Blind
15 W. 16th Street
New York, N.Y. 10011

National Society for the Prevention of Blindness
16 E. 40th Street
New York, N.Y. 10019

Crippled and Neurologically Impaired

National Society for Crippled Children and Adults
2023 West Ogden
Chicago 12, Illinois

United Cerebral Palsy Association
321 W. 44th Street
New York, N.Y. 10036

American Heart Association
44 E. 23rd Street
New York, N.Y.

National Epilepsy League
208 North Wills Street
Chicago, Illinois

Epilepsy Foundation
1419 H Street, N.W.
Washington, D.C. 20005

Muscular Dystrophy Associations of America, Inc.
1790 Broadway
New York, N.Y. 10019

Learning Disabilities

Association for Children with Learning Disabilities
305 Broadway
New York, N.Y. 10007

For All Handicaps

Council for Exceptional Children
National Education Association
1201 16th Street, N.W.
Washington, D.C. 20036

This is the largest membership organization in the field of special education. It has eight divisions:

- Council of Administrators of Special Education
- Association of Education of Homebound and Hospitalized Children
- Council for Children with Behavioral Disorders
- Division for Children with Communication Disorders
- Council for the Education of the Partially Seeing
- Division on Mental Retardation
- Association for the Gifted
- Teacher Education Division

The Council for Exceptional Children has state chapters and a national journal, Exceptional Children.

National Rehabilitation Association
1205 Vermont Avenue
Washington, D.C.

Federal Agencies

Bureau of Education for the Handicapped
Department of Health, Education, and Welfare
7th and D Streets, S.W.
Washington, D.C. 20202

Division of Vocational and Technical Education
Department of Health, Education, and Welfare
7th and D Streets, S.W.
Washington, D.C. 20202

Social and Rehabilitation Administration
Rehabilitation Services Administration
330 C Street, S.W.
Washington, D.C. 20201

VOCATIONAL EDUCATION AMENDMENTS OF 1968
RULES AND REGULATIONS
SELECTED SECTIONS RELATED TO
VOCATIONAL EDUCATION FOR THE HANDICAPPED

102.3(i) "Disadvantaged persons means persons who have academic, socioeconomic, cultural, or other handicaps that prevent them from succeeding in vocational education or consumer and homemaking programs designed for persons without such handicaps, and who for that reason require specially designed educational programs or related services. The term includes persons whose needs for such programs or services result from poverty, neglect, delinquency, or cultural or linguistic isolation from the community at large, but does not include physically or mentally handicapped persons (as defined in paragraph (o)) unless such persons also suffer from the handicaps described in this paragraph.

102.3(o) "Handicapped persons" means mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired persons who by reason of their handicapping condition cannot succeed in a vocational or consumer and homemaking education program designed for persons without such handicaps, and who for that reason require special educational assistance or a modified vocational or consumer and homemaking education program.

102.4(b) Objective of instruction. (1) Vocational instruction shall be designed to:

(i) Instruction related to the occupation or occupations for which the students are in training; that is, instruction which is designed upon its completion to fit individuals for employment in a specific occupation or a cluster of closely related occupations in an occupational field, and which is especially and particularly suited to the needs of those engaged in or preparing to engage in such occupation or occupations. Such instruction shall include classroom related academic and technical instruction and field, shop, laboratory, cooperative work, apprenticeship, or other occupational experience and may be provided either to

(a) Those preparing to enter an occupation upon the completion of the instruction, or
(b) Those who have already entered an occupation but desire to upgrade or update their occupational

[redacted]

skills and knowledge in order to achieve stability or advancement in employment.

(ii) Instruction for vocational students to benefit from instruction described in subdivision (i); that is, remedial or other instruction which is designed to enable individuals to profit from instruction related to the occupation or occupations for which they are being trained by correcting whatever educational deficiencies or handicaps prevent them from benefiting from such instruction.

(3) Pre-technical vocational instruction with the objective specified in subparagraph (b)(1)(ii) shall include instruction of the type described in subparagraph (2) of this paragraph, except that such instruction need not be designed to fit individuals for employment in a specific occupation, but must be primarily designed to prepare individual for enrollment in advanced to highly skilled postsecondary and technical education programs having the objective specified in subparagraph (b)(1)(i) of this section. It shall not include instruction which is primarily designed to prepare individuals for higher education or for professional training of the type described in paragraph (c)(2) of this section, and which is only incidentally designed for individuals preparing for technical education.

(4) Pre-vocational instruction with the objective specified in subparagraph (b)(1)(ii) shall include instruction designed to familiarize individuals with the broad range of occupations for which special skills are required and the requisite for careers in such occupations.

102.5(b) Vocational instruction under contract.

Arrangements with private post-secondary vocational training institutions.

(1) Postsecondary vocational instruction provided in other than public institutions may be provided only through arrangements with private postsecondary vocational training institutions entered into pursuant to paragraph (a) where the State board

or local educational agency determines that such private institutions can make a significant contribution to attaining the objectives of the State plan, and can provide substantially equivalent training at a lesser cost, or can provide equipment or services not available in public agencies or institutions.

(2) For purposes of this paragraph, a "private postsecondary vocational training institution" means a private business or trade school, or technical institution or other technical vocational school providing postsecondary education in any State which meets the requirements set forth in subparagraph (A) through (D) of section 108(11) of the Act. A list of such institutions meeting the requirements of this subparagraph may be obtained upon request from the Division of Vocational and Technical Education, Office of Education, Washington, D.C. 20202.

102.6 Vocational Education for disadvantaged or handicapped persons.

(a) Vocational education for disadvantaged or handicapped persons supported with funds under section 102(a) or (b) of the Act shall include special educational programs and services designed to enable disadvantaged or handicapped persons to achieve vocational education objectives that would otherwise be beyond their reach as a result of their handicapping condition. These programs and services may take the form of modifications of regular programs, special educational services which are supplementary to regular programs, or special vocational education programs designed only for disadvantaged or handicapped persons.

Examples of such special educational programs and services include the following: special instructional programs or pre-vocational orientation programs where necessary, remedial instruction, guidance, counseling and testing services, employability skills training, communications skills training, special transportation facilities and services, special educational equipment, services, and devices, and reader and interpreter services.

(b) Funds available for vocational education for disadvantaged or handicapped persons may not be used to provide food, lodging, medical, and dental services and other services which may be necessary for students enrolled in such programs but which are not directly related to the provision of vocational education to such students. However, the State board or local educational agency conducting such programs shall encourage the provision of such services through arrangements with other agencies responsible for such services.

(c) To the extent feasible, disadvantaged or handicapped persons shall be enrolled in vocational education programs designed for persons without their handicapping condition. Educational services required to enable them to benefit from such programs may take the form of modifications of such programs or of supplementary special educational services. In either case, funds available for vocational education for disadvantaged or handicapped persons may be used to pay that part of such additional cost of the program modifications or supplementary special educational services as is reasonably attributable to disadvantaged or handicapped persons.

(d) If certain disadvantaged or handicapped persons cannot benefit from regular vocational education programs to any extent, even with modifications thereto or with the provision of supplementary special educational services, then these persons shall be provided with special programs of vocational instruction which meet the standards and special programs of regular vocational education programs set forth 102.4 and which, in addition, include such special instructional devices and techniques and such supplementary special educational services as are necessary to enable those persons to achieve their vocational objective. In these cases, funds available for vocational education for the disadvantaged or the handicapped may be used to pay that part of the total cost of the instructional program and supplementary special educational services that are reasonably attributable to the vocational education of disadvantaged or handicapped persons.

(e) Vocational education programs and services for disadvantaged or handicapped persons shall be planned, established, administered, and evaluated by State boards and local educational agencies in consultation with advisory committees which include representatives of such persons in cooperation with other public or private agencies, organizations, and institutions having responsibility for the education of disadvantaged or handicapped persons in the area or community served by such programs or services, such as community agencies, vocational rehabilitation agencies, special education departments of State and local educational agencies, and other agencies, organizations, and institutions, public or private, concerned with the problems of such persons.

102.9 Training of Personnel

(a) General. The State board shall provide for such training (both preservice and inservice) as is necessary to provide qualified personnel meeting the requirements of the State plan pursuant to 102.38. Such training shall be sufficient to provide an adequate supply of qualified teachers and other personnel, including those capable of meeting the special educational needs of disadvantaged and handicapped persons in the State.

(c) Eligibility of enrollees. Training of personnel pursuant to paragraph (a) of this section shall be offered only to persons who are teaching or are preparing to teach vocational education students or consumer and homemaking students or who are undertaking or are preparing to undertake other professionaly or semiprofessional duties and responsibilities in connection with vocational education programs or consumer and homemaking programs under the State plan to whom such education would be useful professionally.

102.22 Membership

The membership of the State advisory council shall exclude members of the State board, and shall include:

(h) At least one person with special knowledge, experience or qualifications, with respect to the special educational needs of physically or mentally handicapped persons;

102.35 State Administration and Leadership

(a) Adequate State board staff. The State board shall provide for a State staff sufficiently qualified by education and experience and in sufficient numbers to enable the State board to plan, develop, administer, supervise, and evaluate vocational education programs, services, and activities under the State plan to the extent necessary to assure quality in all education programs which are realistic in terms of actual or anticipated employment opportunities and suited to the needs, interests, and abilities of those being trained. Particular consideration shall be given to staff qualifications for leadership in programs, services, and activities for disadvantaged persons, handicapped persons, depressed areas, research and training, exemplary programs and projects, residential vocational schools, consumer and homemaking, cooperative vocational education, curriculum development, and work-study.

102.40 Cooperative arrangements.

(b) With State agencies responsible for education of handicapped persons. The State plan shall provide for cooperative arrangements with the State special education agency, the State vocational rehabilitation agency, or other State agencies having responsibilities for the education of handicapped persons in the State. Such cooperative arrangements shall provide for--

(1) the joint development of a comprehensive plan for the vocational education of handicapped persons in the State which shall provide the basis for the provisions in the State plan relating to vocational education of handicapped persons; and

(2) coordination of activities of the State board and the other State agencies in the development and administration of the State plan to the extent that handicapped persons are affected,

such as, for example, in the review of applications for funds for programs or projects providing benefits to handicapped persons. Copies of agreements between the State board and other agencies providing for the arrangements described herein shall be submitted when executed by the State board for filing with the State plan.

102.44 Requirements with respect to construction.

The State plan shall provide assurance that the following requirements will be complied with on all construction projects assisted under parts B and E of the Act:

(d) Accessibility to handicapped persons. In the planning of construction of school facilities under the Act, the State board or local educational agency shall, to the extent appropriate in view of the uses to be made of the facilities, take into consideration the accessibility of the facilities, and the usability of them by, handicapped persons, and of their compliance with the minimum standards contained in "American Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped" approved by the American Standard Association, Inc., with appropriate usable segments of "Building Standards of the University of Illinois Rehabilitation Center" and "Occupancy Guidelines" of the Department of Veterans Benefits, Regional Offices, Veterans Administration" and with such other standards in that regard as the Secretary of Health, Education, and Welfare may prescribe or approve.

102.54 Differences in vocational education needs.

(a) In allocating funds among local educational agencies, the State board shall give due consideration to the relative vocational education needs of all the population groups referred to in 102.51(a) in all geographic areas and communities in the State, particularly disadvantaged persons, as defined in 102.3(i), and handicapped persons, as defined in 102.3(o), and unemployed youth.

(b) In weighing the relative vocational education needs of the State's various population groups, the State board shall give particular consideration to additional financial burdens (other than those which are to be considered pursuant to 102. 56(b)) which may be placed upon certain local educational agencies by the necessity of providing vocational education students, particularly disadvantaged or handicapped students, with special education programs and services such as compensatory or bilingual education, which are not needed in areas or communities served by other local educational agencies in the State.

(c) The State plan shall describe in detail the method by which the State board will give due consideration to the criterion set forth in paragraph (a) in allocating funds among local educational agencies. This description shall include an explanation of:

(1) How the State board will identify the vocational education needs, including the need for special education programs and services referred to in paragraph (b), which must be met by each local educational agency in the State;

102. 59 Percentage requirements with respect to uses of Federal funds.

(a) Application of percentage requirements. The State plan shall provide that allocations of Federal funds pursuant to 102. 52 shall comply with the following requirements with respect to the use of Federal funds:

(3) Vocational education for handicapped persons. At least 10 percent of the total allotment for any fiscal year to a State of funds appropriated under section 102(a) of the Act shall be used only for vocational education for handicapped persons.

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